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The elementary school environment : perceptions of students and teachers.

Jon Scott Bender
University of Massachusetts Amherst

THE ELEMENTARY SCHOOL ENVIRONMENT: PERCEPTIONS OF STUDENTS AND TEACHERS

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by

Jon Scott Bender

Approved as to style and content by:

Robert D. Sinclair
(Chairman of Committee)

(Head of Department)

Douglas R. Forsyth
(Member)

(Member)

Kenneth H. Blanchard
(Member)

May 1971

Dedicated to my wife

Nancy Shank Bender

and daughter

Courtney Jane Bender

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CHAPTER I

INTRODUCTION

In the past decade a sharp increase in research has emerged in the area of educational and organizational environments. An impetus for this activity springs from the notion that determinants of behavior need to be sought in the characteristics of the environmental context.[1] New and varied approaches to school design, to instruction, to curriculum and to school organization seem to reflect an interest for creating the optimal learning environment in educational practice. The interest in environments in both research and practice indicates a concern that the school environment should provide opportunities for the development of the unique interests and potential of each learner. However, a theory of educational environment is not sufficiently developed to provide decision makers with the conclusive findings they need in order to make reliable and objective judgments about the kind of environment that is needed to meet stated objectives.

Many studies about educational atmosphere assume that perceptions of individuals who live in the environment are critical to a description of the environment. For example, if individuals perceive conditions and happenings in the environment as hostile, even though

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[1] James V. Mitchell, "Educational Challenge to Psychology: The Prediction of Behavior From Person-Environment Interaction," Review of Educational Research, XXXIX (December, 1969), 696.

those responsible for maintaining the environment attempt to sustain a non-hostile atmosphere, the environment is described as being hostile. Since teachers have been given the responsibility of affecting the environment of schools, they maintain considerable influence over the environment of the classroom and the total school. The intent of this study is to examine, through student and teacher perceptions, the educational environment of selected elementary schools and to determine to what extent and in what ways these perceptions are similar or different.

Purpose of the Study

The purpose of this study is to compare student and teacher perceptions of the educational environment. Student and teacher perceptions are analyzed to determine to what extent teachers and students perceive the environment to be similar or dissimilar, and further to discover whether environmental patterns emerge from a comparison of student and teacher profiles of individual schools. In addition, student and teacher perceptions of each measured variable are analyzed to determine the degree of similarity between student and teacher perceptions. The organizational climate (OCDQ) subtest scores are then compared with the difference scores between student and teacher perceptions to determine if the degree of similarity between student and teacher perception of a particular variable is significantly related to the organizational climate of schools.

Hypotheses

The following hypotheses are tested in the present study.

1. There will be significant differences between student and teacher perceptions of the learning environment in elementary schools.

2. Teachers and students that score low on Opportunities and Alienation will have more similarity in their perception of Opportunism and Alienation than teachers and students that score high.

3. Teachers and students that score high on Autonomy, Morale, Humanism, and Resource will have more similarity in their perception of Autonomy, Morale, Humanism, and Resource than students and teachers that score low.

4. Dissengagement, Hindrance and Aloofness will be positively correlated with ESES difference scores for each variable.

5. Esprit, Intimacy, Production emphasis, Thrust and Consideration will be negatively correlated with ESES difference scores for each variable.

Definitions

Educational Environment - The educational environment is defined as the conditions, forces, and external stimuli which foster the development of individual characteristics. The environment is recognized as a complex system of situational determinants that

exert an influence upon its members.[2] Murray described the environment by identifying two kinds of press.

> In identifying press we have found it convenient to distinguish between 1, the alpha press, which is the press that actually exists, as far as scientific inquiry can determine it; and 2, beta press, which is the subject's own interpretations of the phenomena that he perceives. An object may, in truth, be very well disposed towards the subject--press of Affiliation (alpha press)--but the subject may misinterpret the object's conduct and believe that the object is trying to depreciate him--press of Aggression; Belittlement (beta press). When there is wide divergence between the alpha and beta press we speak of delusion.[3]

Pace's work in defining the college environment is based primarily on Murray's concept of the beta press. Building on the work of Pace, Sinclair defined five environmental variables that exist in elementary schools--practicality, community, awareness, propriety, and scholarship--and developed the Elementary School Environment Survey (ESES) to measure the extent to which each variable is manifested in a particular school. Using ESES data Sinclair established that:

1. There are differences in educational environment among the designated elementary schools when they are measured by the selected variables.
2. There are patterns in educational environment common to the designated elementary schools when they are

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[2] Benjamin S. Bloom, Stability and Change in Human Characteristics, (New York: John Wiley & Sons, Inc., 1964), p. 187.

[3] Henry A. Murray, Explorations in Personality, (New York: Oxford University Press, 1938), p. 122.

measured by the selected variables.[4]

A factor analysis of the ESES data gathered from fifty-four elementary schools in Massachusetts further refined the instrument and modified the variable constructs.[5] The six constructs which emerged are as follows:

1. Alienation

Environments which score low on this factor reflect the presence of a student body which feels involved in school affairs. A sense of belonging is emphasized in this environment, and this sense of belonging is buttressed by a concern for students. Students demonstrate their involvement by internalizing school objectives in such areas as academic pursuits and obedience to school rules and regulations. The atmosphere is congenial and there is a cohesiveness and a sense of togetherness in this climate.

A high score on this factor demonstrates a feeling of estrangement in the environment. This feeling of alienation could in fact lead to destructive acts perpetuated against the school itself.

In conclusion, this factor encompasses environmental characteristics such as cohesion, concern and a sense of involvement.

2. Humanism

The items in this factor reflect a concern for the value of the individual. It is a supportive climate and is marked by courtesy.

In addition, this value placed on the individual is carried over to his personal acts of expression: aesthetic expression. This climate demonstrates a concern for the man's creativity, and is supportive of his poetry, music, painting and theatre.

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[4] Robert L. Sinclair, "Measurement of Educational Press in Elementary School," (Unpublished Ed. D. dissertation, University of California, Los Angeles, 1969), p. 11.

[5] David G. Sadker, "Schools As Seen by Children: A Factor Analytic Study of the Perceptions of Fifth and Sixth Grade Students Toward Elementary School Environments," (Unpublished Ed. D. dissertation, University of Massachusetts, 1971), pp. xiv-xvi.

A school characterized by this atmosphere is concerned with the integrity of the individual and a respect for his cultural and aesthetic expressions.

3. Autonomy

This factor suggests an environment which supports and encourages student independence. This climate suggests student initiative as well as autonomy. Emphasis on procedures and supervision are minimized. Self-direction rather than the obedience to rules of protocol is important. Individual differences, both in opinion and academic interests, are stressed. Another aspect of this environment is that the lines of communication are open and candid.

This environment affords the student the opportunity to share in responsibility for his own learning.

4. Morale

The questions in this factor relate to student attitudes towards the school. A high score on this factor indicates a friendly and cheerful school environment. This environment may be described as a happy one in which students and teachers have a warm relationship.

A low score on this factor indicates a negative student attitude towards the school, and may suggest poor relations between student and teacher as well as disruptive student behavior.

This factor is concerned with student relations toward school, and the cooperating behavior which relates to such attitudes.

5. Opportunism

The questions in this factor reflect an environment which is characterized by behavior which adapts to expediency or circumstances. A high score on this factor suggests a climate in which one gains social and academic success by knowing how to behave with important and powerful people. Informal procedures and the importance of personal relationships are emphasized.

6. Resources

The items in this factor reflect the amount of learning resources available to the students. The emphasis here

is on the availability of in-class as well as extra-class resources. Included in this category are such resources as written materials, field trips, television, exhibits, and music. The availability or friendliness of the teacher is also included in this dimension. Schools which score high on this factor offer a variety of learning resources to their students.

Organizational Climate -- The concept of organizational climate used in this study refers to the teacher-principal and teacher-teacher social interaction in the school. Halpin's Organizational Climate Description Questionnaire (OCDQ) identifies eight components of the organizational climate as perceived by teachers; four of which describe selected teacher behaviors, and four of which describe selected principal behaviors. The eight components are as follows:

Teacher Behaviors

1. Disengagement

Disengagement refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motion," a group that is "not in gear" with respect to the task at hand. It corresponds to the more general concept of anomie as first described by Durkeim. In short, this subtest focuses upon the teachers' behavior in a task-oriented situation.

2. Hindrance

Hindrance refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teacher construes as unnecessary busywork. The teachers perceive that the principal is hindering rather than facilitating their work.

3. Esprit

Esprit refers to "morale." The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. Intimacy

Intimacy refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

Principal's Behavior

5. Aloofness

Aloofness refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and regulations rather than to deal with teachers in an informal, face-to-face situation. His behavior, in brief, is universalistic rather than particularistic; nomothetic rather than idiosyncratic. To maintain this style, he keeps himself--at least, "emotionally"--at a distance from his staff.

6. Production Emphasis

Production emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive, and plays the role of a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. Thrust

Thrust refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." "Thrust" behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets. Apparently, because he does not ask the teachers to give of themselves any more than he willingly gives of himself, his behavior, though starkly task-oriented, is nontheless viewed favorably by the teachers.

8. Consideration

Consideration refers to behavior by the principal which is characterized by an inclination to treat the teacher "humanly" to try to do a little something extra for them in human terms.

Student Score and Teacher Score--A central concept in the present study and in previous studies of educational environments

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[6] Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (Univ. of Chicago: Midwest Administration Center, 1963), pp. 177-178.

is that the school is the unit of measure. Consequently, the terms student score(s) and teacher score(s) refer to a single score for a school derived from either the students or the teachers. Whenever a reference is made to the score or scores of a particular student (teacher) or set of students (teachers) the word individual is used to distinguish an individual score from a school score. For example, "individual student scores" refers to scores of individual students within a school or across schools, and "student scores" refer only to the school scores for students.

Significance of the Problem

The significance of the problem has three dimensions. The first involves the importance of environmental research in general and its relatively unexplored dimensions. The second and third have to do with the theoretical and practical significance of the present study. A major communications gap exists between persons involved in research and theory building and the people who work on the front lines of educational practice. The present study while making a contribution to environmental theory is also designed to foster change in educational practice by providing direct feedback of research findings to the participating schools.

The importance of environmental research has become apparent as people in schools, hospitals and social agencies become increasingly aware of the environment as an influence in human

development. However, an investigation of the literature reveals an abundant store of information on individual behavior and a dirth of study on the environment. Bloom suggests that:

> Although psychology has always had a place for the environment in its theories, it has not had a corresponding emphasis on the environment in its research procedures, techniques of measurement, or even in its efforts to bring about change in the individual or group.[7]

Bloom further maintains that "There is empirical as well as theoretical support for the use of the environment in our attempt to explain and predict growth and development."[8] In addition, a strong relationship between behavior and environment has been verified by Murray,[9] Bloom,[10] Anastasi,[11] and others. Thus research that deals with the environment can be viewed as having a significant contribution to our understanding of human behavior, and worthy of investigation.

Second, the present study is of particular theoretical significance. Bloom suggests that "the strategy of research on environmental variation begin with the attempt to describe and measure the specific characteristics of environments and then proceed to the study of the consequences of various combinations of

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[7] Bloom, Stability and Change in Human Characteristics, p. 183.

[8] Ibid., p. 184.

[9] Murray, Explorations in Personality.

[10] Bloom, Stability and Change in Human Characteristics.

[11] Anne Anastasi, "Heredity, Environment and the Question 'How', Psychological Review, LXV (1958), p. 196-207.

these specific characteristics."[12] The present study attempts to describe and measure specific characteristics of the elementary school environment and to examine some appropriate relationships.

A Significant body of knowledge is being generated on the nature of the perceived environment. Investigators are studying the relationship of the perceived environment to the other variables in the environment, such as factors of communication, principal personality, leader behavior, attitudes, teacher personality, job satisfaction and others. Very few research efforts compare the perceptions of two distinct populations, i.e., teachers and students, of the same environment using the same environmental constructs. This study deals with making such comparisons. To the extent that such an approach has been untried and that it presents a new perspective of the phenomena of educational environments, the present study will provide valuable information to the structure of a comprehensive theory of educational environments.

It is useful to note a recent observation by Silberman:

> What educators must realize,... is that how they teach and how they act may be more important than what they teach... Children are taught...by the ways teachers and parents behave, the way they talk to children and to each other, the kinds of behavior they approve or reward and the kinds they disapprove or punish.[13]

Since teacher behavior is a potentially strong influence on the environ-

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[12] Bloom, Stability and Change in Human Characteristics, p. 185.

[13] Charles E. Silberman, Crisis in the Classroom, (New York: Random House, 1970), p. 9.

ment, a teacher's perception of that environment would reflect to a certain extent his or her own behavior. By comparing student and teacher perceptions of the educational environment, it will be possible to arrive at a clearer understanding of the relationship between the perceptions of two fixed groups within the environment.

Third, this study will be of significant practical value by providing teachers, principals and other decision makers in the school with information about conditions that exist in schools. An assessment of the educational environment as perceived by students and teachers will have important implications for developing and revising school programs. By examining the results of this study, the school staff can determine to what extent the reported findings concur with their expectations and identify areas of desired change. Feedback to individual schools of the findings of the present study has the potential to generate significant questions for further consideration. For example, if student perceptions of the school are different than teacher perceptions, is there what Murray calls delusion, i.e., a conflict between expressed intentions of teachers with regard to their behavior and their actual behaviors? Are there situations, variables, or conditions blocking student perception of what the school intends to foster? Detailed information about the school environment will provide a more objective basis for making decisions about desired changes. It can also indicate aspects of the school that need change by verifying or raising questions about previously held assumptions concerning the nature of the school environment.

Approach to the Study

The approach to the present study will take two directions. First, student and teacher ESES data will be analyzed to determine if significant differences do indeed exist between their perceptions of the environment. The schools will be rank-ordered within each variable from most congruent schools to least congruent schools for further analysis. Each rank order will be studied to see if certain schools are consistently congruent or divergent across variables and to determine the frequency of congruent or divergent schools within each variable. In addition to looking for differences across schools, a school profile, recording both student and teacher ESES scores, will be generated to investigate environmental patterns within schools. The profiles will be studied to determine if students score consistently higher on the ESES variables than teachers, or vice versa. The scores of congruent variables within schools will also be noted to determine if they are consistently and significantly higher or lower than scores of divergent schools. This will show the degree to which congruent perceptions are related to the level of variable scores.

Second, the relationship between the organizational climate and the similarity between student and teacher perception of the educational environment is explored. The difference scores between student and teacher perception for each ESES variable are correlated

with the OCDQ subtest scores. This analysis will determine what relationships exist between particular aspects of the organizational climate and defined characteristics of the educational environment.

Sample

The sample includes all teachers and the fifth and sixth grade students of thirty-six elementary schools in the states of Massachusetts and Pennsylvania. The OCDQ and the teacher form of the ESES was administered to the entire instructional staff of each school. The student form of the ESES was administered to the fifth and sixth grade students. The schools reflect a stratified sample having the following demographic characteristics: city, urban town, and town. With the exception of eight schools, all schools in the sample are members of the Network of Innovative Schools.

The Network of Innovative Schools is a consortium of approximately sixty-five schools in the state of Massachusetts that have been self-selected from all public, private, and parachoical schools in the state. The Network was formed for the purpose of improving the quality of education through increased collaboration between the University of Massachusetts and member schools and among the member schools themselves.

Approximately fifty letters were sent to Network schools soliciting their participation in the study. Thirty-five responded

favorably, and were included in the sample. In addition, eight non-Network schools are included in the sample.

Instrumentation

The OCDQ, administered to the instructional staff, is a 68 item questionaire of teacher-teacher and teacher-principal interaction. Statements of conditions, behaviors and interactions are presented to which teachers respond by marking one of the following: rarely occurs, sometimes occurs, often occurs, very frequently occurs.

The ESES is a forty-two item survey of conditions, behaviors or feelings about the educational climate of the school. The statements in the student and teacher forms are identical. The instructions for each form vary in wording to reflect the nature of the audience. In addition, initial questions soliciting demographic data differ for students and teachers. Both students and teachers are requested to respond either true or false to all statements on the survey.

Since this was the first administration of the ESES in its revised form, reliability and validity checks are also made. An estimate of internal consistency is used to calculate the degree of reliability. Since the content--items--of the new ESES is essentially unchanged, content validity analysis will rely heavily on the work done for the original ESES. Second, construct validity will be established by correlating ESES data with OCDQ subtest scores.

Analysis of the Data

The student and teacher scores on the ESES are analyzed to determine if students and teachers perceive the environment in significantly different ways. Analysis of variance procedures performed between student and teacher scores on variables across schools and between individual student scores and individual teacher scores determine the significance of the difference between the perceptions of the groups. Within each variable, schools are rank ordered moving from high congruence to low congruence. The criterion of congruence is based on two determinants. First, schools in which there is no significant difference between student and teacher perception are considered to be highly congruent. Second, for schools in which student and teacher scores are significantly different, the numeric difference (difference score) between the scores is used as an estimate of congruence.

In order to investigate the relationship between difference scores and the level of student and teacher scores three techniques are employed. First, analysis of variance is performed on difference scores of high scoring schools and on difference scores of low scoring schools. Second, correlations are performed between teacher scores and difference scores and student scores and difference scores. Third, the profile of student and teacher scores are plotted starting with schools having the greatest difference scores to schools

with the least difference scores. Each of these techniques will help answer the second and third hypotheses.

A school profile of the student and teacher perceptions is generated for each school and analyzed in two ways. First, the profiles are viewed to determine if students score consistently higher on each variable than teachers, or vice versa. Second, the profiles will be analyzed to determine if within schools the profile pattern for teachers is similar to the profile pattern for students.

The final analysis procedure uses OCDQ data. A Pearson product-moment correlation is run on Organizational Climate subtest scores and ESES difference scores. The results of this analysis identify the relationship between the defined variables of the organizational climate and difference between student and teacher perception of the educational environment.

The following Chapters will report the conduction of the present study. Chapter two establishes the theoretical base used for the present study, views the historical development of environmental measures used in the present study and reviewes the literature dealing with studies that compare perceptions of different populations within a single environment. In Chapter three, the research design, sampling and statistical procedures, validity and reliability of the instruments, and data analysis procedures are described in detail. Analysis of the data, including profile comparisons, analysis of variance and multiple

correlation comparisons are reported in Chapter four. Finally, the findings and recommendations that emerge of the analysis are reported in Chapter five.

CHAPTER II

REVIEW OF THEORY AND RESEARCH

The purpose of this Chapter is threefold. First, an effort will be made to place the present study in perspective with the field of environmental research and establish the theoretical base used in the present study. Second, the development of environmental measures and their relation to the present study will be reviewed. Third, research that compares the perceptions of two distinct populations within an environment will be discussed.

Perspective of Environmental Research

For several decades the nature, nurture question has had periods of lively controversy. Lewis Terman's expressed need to answer questions about the influence of nature and nurture guided the 1928 Yearbook of the National Society for the Study of Education. Terman proposed that:

> If the differences found are due in the main to controllable factors of environment and training, then, theoretically, at least, they can be wiped out by appropriate educational procedures... On the other hand, if they are due primarily to differences in original endownment, then the duty of the school is clearly to provide for differentiated training which take these native differences into account.[1]

In the years that followed, an abundent amount of research was

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[1] Lewis M. Terman, "Introduction," Nature and Nurture: Their Influence Upon Intelligence, Twenty-Seventh Yearbook of the National Society for the Study of Education, Part I (Bloomington, Ill.: Public School Publishing Co., 1928), p. 1.

conducted to determine whether nature or nurture was responsible for the variance found in individuals. Serious problems were raised but few answers were found. Research directed toward the same questions by different research teams using the same data yielded conflicting conclusions.[2]

To a certain extent heredity and environment are philosophical as well as scientific constructs, in that they influence one's outlook on man and how to deal with his problems. That heredity and environment both influence the behavior of individuals has seldom been questioned. What has been questioned is which type of factor, heredity or environment, is responsible for individual differences and how much of the variance is attributable to each. Anastasi asserts that a more fruitful approach is to answer the question "How?" "There is still much to be learned about the specific modus operandi of heredity and environmental factors in the development of behavioral differences."[3] Further the effects of heredity will vary within a given environment and similarly the contribution of environment will vary under different heredity conditions. Thus an interaction of the two exists, and our major task is to understand how each affects behavior in the context of the other.

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[2] Anne Anastasi, "Heredity, Environment and The Question 'How', "Psychological Review, LXV (1958), p. 197.

[3] Ibid.

The present study should not be viewed then as having a bias for environmental influences over heredity factors. Although the short range purpose of the present study is directed toward understanding the environment, the long range interest is to understand how the environment functions so that future research (environmental or heredity) will have a broader knowledge base from which to procede.

A variety of theoretical approaches are used to study educational environments having their roots in the work of Sullivan (1963, 1956), Lewin (1935, 1963), Fromm (1941, 1955), Murray (1938), Murray and Kluckholm (1953) and Getzels and Thelen (1960).[4] Three distinct approaches can be identified: aptitude-method interactions, verbal interactions analysis, and person-environment interaction. In the aptitude-method interactions approach, the environment is defined as the instructional treatment. Cronbach states that, "treatments (instructional methods) are characterized by many dimensions: so are persons. The two sets of dimensions together determine a payoff surface."[5] In verbal interaction analysis, the verbal behavior of the teacher receives primary attention. According to Flanders, the verbal behavior is the principal determinant of the kind of

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[4] James V. Mitchell, "Educational Challenge to Psychology: The Prediction of Behavior From Person-Environment Interaction," Review of Educational Research, XXXIV (1969), 696.

[5] Lee J. Cronbach, "How Can Instruction Be Adapted to Individual Differences?" Learning and Individual Differences, ed. by Robert M. Gagne, Chapter 2, (Columbus, Ohio: Charles E. Merrill, 1967), p. 680.

environment that exists in the classroom.[6] The third approach, person-environment interaction, defines environment in terms of a much more comprehensive setting than the previous two. Sells states that:

> The most obvious need in evaluating the manifold encounter of organism and environment is a more satisfactory and systematic conceptualization of the environment. This implies a taxonomic dimensional analysis of stimulus variables comparable to the trait systems that have been developed for individual difference variables.[7]

Efforts to generate taxonomic stimulus variables have been made and will be discussed in the following section.

Theoretical Approach

The theoretical approach used in the present study compliments research which has its base in the classic work of Henry Murray published in 1938, Explorations in Personality. In building a theory of personality, Murray identified two influences on human behavior -- need and press -- which combine to form a "dynamical structure" or thema. Need refers to a hypothetical force within an individual toward or away from an unsatisfying situation. It is a disequilibrium which stresses toward equilibrium. Press is a

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[6]Mitchell, "Educational Challenge to Psychology," p. 705.

[7]Saul B. Sells, "An Interactionist Looks at the Environment," American Psychologist, XVIII (1963), p. 700.

"tendency or 'potency' in the environment... which is exerted on an organism.... Everything that can supposedly harm or benefit the well-being of an individual may be considered pressive."[8]

The phenomena of environmental press can be further described by distinguishing between the alpha press and the beta press. As described in chapter one, alpha press constitutes the effects of the environment as determined by objective outside observers. Beta press is defined by the subjects interpretation of a phenomena through his perception as a participant. The significance in distinguishing between the alpha and beta press is that an assessment of the alpha press can produce a very different description of the environment than an assessment of the beta press. In other words, an individuals perception of the environment may differ from an objective observer's analysis. If divergence exists, Murray says "we speak of delusions."[9] To the extent that delusion mitigates against healthy human interactions, divergence between the alpha and beta press is undesirable.

After a period of extensive research and observation, Murray and his associates identified a taxonomy of fourty personality variables: twenty manifest needs, eight latent needs, four inner states and twelve general traits. However, "the representation of the personality

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[8] Murray, Explorations in Personality, p. 42, 54, 119.

[9] Ibid., p. 122.

as a hierarchical system of general traits or need complexes leaves out the nature of the environment, a serious omission."[10] In order to understand individual personality as it functions in the context of environment, Murray sought to discover the influence of environment on human needs. He suggested that the contributing influence of the environment on individual personality can be presented according to its "effect" on an individual. By effect is meant "what is done to the subject before he responds (ex: belittlement by an insult) or what might be done to him if he did not respond (ex: physical injury from a falling stone) or what might be done to him if he did not respond by coming into contact with the object (ex: nourishment from food)."[11] Thus, the environmental effects can be viewed as counterparts of the personality needs. For a particular individual need there is a corresponding environmental press. For example, a person may have a need for deference, (to admire and support a superior). Correspondingly, the press in a particular environment may exert an external pressure of deference (press for a subject to admire and support a superior). This is not to suggest that need and press between an individual and his environment will be in agreement. To the contrary, at times there may be dissonance between a certain individual need and the environmental press. To

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[10] Ibid., p. 116.

[11] Ibid., p. 117.

continue with the above example, if a person has the need of deference, but the environmental press works against deference, encouraging each person to become a leader of their own, a conflict results. Thus, by understanding both individual needs and the environmental press we can more clearly deal with human behavior.

For the purposes of the present study we are concerned with Murray's concept of beta press. It is assumed that the perceptions of individuals within the environment of the influences and pressures that exist, constitute the environment and further, that the beta press can be effectively measured. By assessing individual perceptions and by describing the unique characteristics of an environment through these perceptions, an investigator is one step closer to understanding the behaviors of individuals within that environment.

Measures of Educational Environments

Building on Murray's theoretical work, Stern and Pace developed measures to assess both individual needs and the press of college environments. The Activities Index (AI), developed in 1953, assesses students needs in taxonomy fashion. It consists of 300 items which load, ten each, on 30 subtests. The thirty subtests correspond to Murray's personality variables. In 1958 the AI subtests were restructured to form the present College Characteristics Index (CCI).

The CCI subtests reflect the AI need descriptions in terms of environmental press.[12]

The CCI can be used to identify eleven factors of the college environment: Aspiration Level, Intellectual Climate, Student Dignity, Academic Climate, Academic Achievement, Self-Expression, Group Life, Academic Organization, Social Form, Play-Work, Vocational Climate. These factors in turn were appropriately grouped to describe five College Climates of Culture Factors: Expressive, Intellectual, Protective, Vocational and Collegiate. Both instruments have been administered extensively (over 100,000 students) across the nation to a wide sample of college types, e.g., independent liberal arts, denominational, university-affiliated liberal arts, business administration, engineering, and teacher training.

Stern found that distinct and unique characteristics emerged for each type of institution. Private, non sectarian, and accredited undergraduate liberal arts college ranked highest on intellectual climates. Denominational colleges and universities "combine repressive custodial practices with high levels of emphasis on social form, administrative organizations, and vocational orientation."[13]

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[12] George G. Stern, People in Context, (New York: John Wiley and Sons, Inc., 1970).

[13] Ibid.

Large universities stress a high level of collegiate play and peer-culture amusement. Stern suggests that the AI and CCI can be used "to increase fundamental knowledge about the psychological characteristics to student attitudes and to criteria of institutional excellence, and to explore ways in which these understandings might be applied in order to promote effective education."[14]

Another measure of the college environment is the College and University Environment Scales (CUES) developed by Pace. To derive CUES, a principal varimax factor analysis routine was employed on CCI data collected in fifty schools. CUES consists of 150 CCI items which load on five scores identified as Practicality, Community, Awareness, Propriety and Scholarship.

A major methodological problem which confronts both CCI and CUES is that student perceptions of their college environment may be influenced and distorted by their own personality characteristics.[15] Ann McFee set out to determine the general relation between corresponding need press measures, and the specific relation of each item to a relevant personality need and scale. Pearson product-moment correlations were calculated between each of the AI and CCI scales. The correlations ranged from -.007 to .056. None of the correlations were significant at the 5% level. The results of McFee's

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[14] Ibid.

[15] Ibid.

study indicate that no strong relation exists between personality needs and the students perception of environmental press.[16]

Elementary School Environmental Measures

The research discussed to this point has been directed toward college environments. The amount of attention given to the study of elementary environments to date is significantly less both in scope and in depth. Yet, the need to understand environmental effects on human development in the elementary school is just as great. The changes that occur in the emotional, social and intellectual growth of children during the elementary school years are extensive to say the least. Measures of the elementary school environment will help identify and describe forces affecting child growth and development. With such information schools can mold the environment to provide the optimal learning climate. From a search of the literature three attempts to measure the elementary school learning environment can be identified: ESES, KESF and ESCI.

Sinclair, adapting the variables from CUES, generated the Elementary School Environment Survey (ESES). In order to establish the CUES variables as viable descriptions of the elementary school environment, Sinclair set out to find relevant individual characteristics and their environmental counterparts. From Bloom's work, he

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16 Ann McFee, "The Relation of Students' Needs To Their Perceptions of a College Environment," Journal of Educational Psychology, LII (1961), 26.

established that intelligence and achievement are stable individual characteristics developed in part by the environment at early ages. Further, the work of Richard Wolf was used to define the environmental counterparts to intelligence; and the work of Ravindrakuman Dave was used to define six environmental counterparts to achievement. Sinclair determined that each environmental counterpart to intelligence and achievement theoretically relate to one or more of Pace's variables. Two forty item forms were generated by adapting CUES items to reflect the elementary school setting. The findings supported two major hypotheses. First, elementary schools differ along the five selected variables. However, the Practicality and Scholarship variables yielded smaller differences among sample schools and lower reliability and validity estimates than Propriety, Community and Awareness variables. Second, there are patterns in educational environment common to the designated elementary schools when they are measured by the selected variables.[17]

Sadker, using ESES data collected from fifty-four elementary schools in Massachusetts, modified the original ESES variable constructs. Student responses were subjected to several factor analysis techniques to determine the salient environmental demensions of elementary schools. Sadker found that Alienation and Humanism are

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[17] Sinclair, "Measurement of Educational Press," p. 113.

important affective components of the sample schools. Propriety as assessed in CUES becomes a broader factor in the elementary school involving student independence or Autonomy. Scholarship is not a distinct dimension of the elementary school but is represented in the broader dimension of Resources. Opportunism, similar to CUES Practicality is similar for both elementary school and college environments. Thus, ESES variables that emerge in Sadker's study titled Alienation, Autonomy, Opportunism, Resource, Humanism and Morale are modifications of the original ESES variables.[18] It should be noted that validity and reliability estimates of the modified instrument have yet to be made. Although Sadker's study is thorough and well developed, the suggested revisions for ESES will need to have considerably more work to establish confidence in its results.

Keys to Elementary School Environment (KESE) represents another attempt to assess the environmental press of elementary schools. Whereas, Sinclair relied heavily on theoretical sources to generate and validate his instrument, Webb, in KESE, generated his instrument from the opinions of administrators and teachers. Webb's work keyed off the following statement:

> The goals of an institution can be determined on the basis of information gathered from key persons who have had and still have a hand in developing them. However, educational objectives are frequently stated in relatively vague and abstract terms. Even the formulation of an objective in

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[18] Sadker, "Schools As Seen By Children," p. 133.

> precise words does not necessarily mean that the manifest of literal content of the statement is to be considered a valid aspect of the press. The genuine demands which confront participants in the situation are reflected actual practices which characterize the interaction process.[19]

The school philosophy and interviews with classroom teachers and administrators served to identify the environmental press toward ten factors. Items were generated to assess the identified press factors from the perceptions of the sixth grade students. The findings indicated that the alpha press was congruent with the beta press. However, students perceived no significant press toward moral and spiritual values and a negative press toward independence.

A third effort to assess the educational climate of elementary schools was made by Berreman. The Elementary Characteristics Index (ECI) is a elementary level version of CCI. Items for ECI are generated in three ways. First, seventh and eighth grade students were asked to write essays about their school. Characteristics about the school were selected as items for ECI. Second, items from an uncompleted instrument, the High School Characteristics Index by Ramery were selected. Third, items from Stern's HSCI and OCI which seemed appropriate were selected. The Murray like categories used in CCI were used to categorize items. The final

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[19] G. G. Stein, M.I. Stein, and B.S. Bloom, Methods in Personality Assessment, (Glencoe, Illinois: The Free Press, 1968) p. 40.

[20] Doris J. Webb, "An Analysis of Environmental Press as Perceived by Sixth-Grade Students," (Unpublished Ed.D. dissertation, Texas Technological College, 1967), pp. 29-31, 144-147.

product is a 300 item instrument which is administered in two fifty minute sittings.[21]

Each of the instruments discussed above approaches an assessment of the elementary school environment from different directions. The approach used in ESCI was to combine student opinion with adaptations from existing measures of the educational environment. Variable constructs were borrowed verbatum without establishing their accuracy for elementary schools. In KESE, the school philosophy and teacher and administrator opinions of the target schools served to establish environmental constructs. Sinclair uses existing measures of the educational environment and imput from teachers to generate ESES. In addition, a rigorous theoretical base is established to support the ESES variables. Consequently, more confidence can be placed in ESES than in KESE and ESCI. Further, the refinements made to ESES subsequent to its development and its relatively widespread use add to the confidence that can be placed in the instrument. However, each of the instruments has established that the educational environment of elementary schools differ.

Measures of the Organizational Climate

To this point we have been concerned mainly with measures

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[21] Norman Paul Berreman, "An Investigation of Certain Elementary School Environments Having Different Mental Health Services," (Unpublished Ed. D. Dissertation, Arizona State University, 1967).

of the environment that assess the perceptions of the learners or that address themselves to forces directly related to the learning environment. Running paralled to and sometimes meshing with the work discussed above is research which looks at the organizational climate (or environment) of schools.

Owens states that "organizational behavior... can be seen as a function of a dynamic interrelationship between the needs of the individual person and the needs of the organization as they are expressed by demands on the individual."[22] The nature of the dynamic interrelationship that emerges is unique for each organization. Halpin suggests that "personality is to the individual what Organizational Climate is to the organization."[23] Two notable instruments are the Organizational Climate Index (OCI) by Stern and Steinhoff and the Organizational Climate Description Questionaire (OCDQ) developed by Halpin and Croft.

The OCI was first administered to public schools in 1965. A direct adaptation of the CCI, the OCI uses 300 items to gather data on 30 of Murray's need-press scales. Two second order and six first order factors are identified. The second order factor Developmental Press includes five first order factors: Intellectual Climate, Achievement standards, Practicalness, Supportiveness, and Orderliness.

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[22] Robert G. Owens, Organizational Behavior in Schools, (Englewood Clifts: Prentice Hall, 1970), p. 169.

[23] Ibid., p. 168.

Subsumed under the second order factor Control Press is the sixth first order factor Impulse Control. The scores of the second order factors, Developmental Press and Control Press are plotted along intersecting axes and an OCI score is determined. Stern and Steinhoff found that the fourteen schools used in the sample exhibited a variety of climate types with no clustering of scores at any one area.[24]

Of particular importance to the present study is the OCDQ, since it is used in the research design. A direct outgrowth of the LBDQ (Leadership Behavior Description Questionaire), and the Ohio State Leadership Studies, the OCDQ represents one of the most widely used measures of the organizational climate. Eight variables describing both teacher-teacher interaction and teacher-principal interaction are identified from a sixty-eight item questionaire. Teacher interaction is characterized by four subtest: Disengagement, Hindrance, Esprit, and Intimacy. Principal interaction is characterized by four subtests: Aloofness, Production emphasis, Thrust,and Consideration. Halpin and Croft further identified climate types which reflect a characteristic profile of the environmental subtests. Climate types are open climate, autonomous climate, controlled climate, familiar climate, paternal climate, and closed climate. Further research tends to discredit the reliability and validity of the climate type profiles of the OCDQ. However, similar checks tend to

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[24] Ibid., p. 189-190.

support subtests scores.[25]

Studies of Environmental Congruence

A search through studies of school environments uncovers a few research efforts that compare the perception of two distinct groups within an environment, using the same contructs. There are studies that compare perceptions by different groups using different constructs. In the latter case the purpose is usually to determine the congruence, relationship, or fit of two or more sets of constructs in an environment. For example, what is the relationship between the organizational climate and the educational environment. Studies that do attempt to compare the congruence of perception of the same constructs use different techniques for assessing the perceptions for each group. Webb determined that congruence existed between student and teacher perceptions of the environment.[26] However, teacher perceptions were determined via interview, and student perceptions were recorded by their response to KESE. One problem in determining congruence in this manner is that KESE was generated from the teacher interviews, consequently the students were in effect confirming teacher perception.

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[25] John H. M. Andrews, "School Organizational Climate: Some Validity Studies," Canadian Education and Research Digest, (December, 1965), 319-334.

[26] Webb, "An Analysis of Environmental Press," pp. 144-147.

In other words student responses were dependent on the teachers' initial assessment and it would be logical to expect a meeting of teacher and pupil perceptions.

In 1965, Creamer sought to analyze the congruence between perceived and reported environment on a college campus. The reported environment, alpha press, was assessed through an impartial board decision derived from documentary evidence. The beta press, perceived environment, was assessed from CCI scores. The main purpose of this study was to analyze the degree of congruence between the real environment and the perceived environment. In addition, the study analyzed perceived differences among seven campus groups: entering freshman, transfer students, fraternity-sorority students, married students, student leaders, and faculty. Creamer found that a significant positive relationship existed between the reported environment and the perceived environment. However, significant differences in perception of environmental pressures exists within the college and among special groups on the campus.[27]

In 1968, de Coligny studied the congruence between and among student and faculty perceptions of male undergraduate types. Five

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[27] Don G. Creamer, "An Analysis of the Congruence Between Perceived Environment and Reported Environment," (Unpublished Ed. D. dissertation, Indiana University, 1965, pp. 124-129.

male undergraduate types were identified from Stern's description of five basic campus cultures. He found more congruence than incongruence between the perceptions of students and faculty. However, vocational types achieved the most congruence and expressive types the least congruence across all comparisons.[28]

Butler investigated the perceived environment between and among subcultures on a university campus yielded no significant differences in perception. Each of the four subcultures, academic, collegiate, vocational, and nonconformist, perceived the environment in the following order of prevelance: (1) Practicality (2) Community (3) Awareness (4) Propriety and (5) Scholarship.[29]

An important consideration in studying the congruence of perception in a college environment is that to some degree student type and college type parings are self selected. In other words, students learn of a college or university by listening to students, reading literature, and hearing news reports, etc. They subsequently have an opportunity to choose that college which "fits" their needs. Elementary and secondary students in general do not have this opportunity, consequently their perception of the educational environment

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[28]William Gaspand de Coligny, "A Study of the Extent of Congruence Between and Among Student and Faculty Perceptions Of and Reactions To Male Undergraduate Types," Dissertation Abstracts, (1969),Vol. XXIX, p. 3763.

[29]Robert Dale Butler, "An Investigation of the Perceived Environment Between and Among the Existing Subcultures on a University Campus," Dissertation Abstracts (1969), Vol. XXIX, p. 3412.

is free of the bias which could affect student perception of the college environment.

Several studies of perceived congruence have been done at the elementary level. However, they deal largely with comparisons of teacher (male) - teacher (female) or teacher-principal perceptions. Schaeffer, for example, found male teachers thought boys had more problems in school than did female teachers. He also found that younger female teachers viewed boys as having more problems than did older female teachers. The reverse perception occured for girls.[30]

Hood analyzed the congruence of perception on factors which affect teacher morale. It was determined that factors most important for teacher morale are primarily concerned with the personal life and well being of the individual teacher, and directly related with the building principal as a prime determinant. A higher degree of congruence was found between elementary school teachers and the principal than between secondary school teachers and the principal. The greatest divergence was found between the school board and the teachers as a whole.[31]

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[30]Donald Thomas Schaeffer, "An Investigation Into the Differences Between Male and Female Elementary Teachers in Their Perceptions of Problems In Students," Dissertation Abstracts (1969), Vol. XXIX, p. 4201.

[31]Evans Carrol Hood "A Study of Congruence of Perceptions Concerning Factors Which Affect Teacher Morale," Dissertation Abstracts, (1967), Vol. XXVII, p. 1589.

Boisen studied teacher and principal perceptions and expectations for the organizational climate. She found that principals tended to view the climate more favorably than teachers. Schools that were perceived as closed climates had greater divergence than schools that had open climates.[32]

Summary

The present study is designed to foster an understanding of the educational environment of elementary schools and how subgroups within the school perceive the environment. A variety of approaches and subsequent instrumentation have been employed to study elementary, secondary and college environments. The present study uses a theoretical base established by Murray which is becoming a tradition in environmental studies.

The major emphasis of environmental studies to date has been in the college and university setting. However, within the past five years the elementary school has received greater interest.

Little research efforts have been conducted to determine the congruence of perception between two distinct groups, e.g. students and teachers, within the environment using the same constructs and

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[32]Angeline Boisen, "Relationships Among the Perceptions and Expectations Held By Principals and Teachers for the Organizational Climate of Elementary Schools," Dissertation Abstracts, (1967), Vol. XXVII, p. 2763.

the same measuring procedure. The present study deals with such relationships. By assessing both student and teacher perception of ESES constructs with the ESES instrument, the congruence of their perception can be measured.

CHAPTER III

RESEARCH PROCEDURES

In chapter three the research design employed and the procedures for implementing the design are described. The procedures for selecting the sample and a description of the sample are reported. In addition, the instrumentation, the validity and reliability of the instruments, and the scoring procedures are discussed.

The Sample

A current concern in certain sectors of educational thought, is the large gap that exists between what is known as a result of educational research and what is done in actual practice. One reason this gap exists is that little or no provision is made to disseminate research findings to persons heavily involved in educational practice. Research teams often gather data from schools and never share their findings with these schools in any meaningful way. In light of this concern, a major consideration of the present study is to provide feedback of its findings to the sample schools. It is thought that schools will benefit by sharing the findings and implications of the present research effort. Thus a sample was selected to which the research findings could be easily disseminated. A second consideration in selecting a sample was the nature of the schools which composed the sample. For the present study, it is desirable to have a sample that reflects a wide variety of

demographic characteristics. The Network of Innovative Schools provided a vehicle through which both of these considerations could be realized.

The Network of Innovative Schools (NIS) is a consortium of schools in Massachusetts with a common interest of improving the quality of education. Every public, private, and parochial school in the state was invited to become an NIS member. A total of 85 schools and school districts responded, indicating interest. It should be noted that despite the title of the organization, NIS is not a homogeneous group of highly innovative schools. Aside from representing a wide range of demographic characteristics, member schools also exhibit a broad spectrum of educational practice. Certain schools are extremely innovative and/or progressive, while others are very conservative and/or traditional. One common factor within each school, however, is an expressed desire to improve education by sharing their experiences and expertise with other NIS schools. Thus the NIS schools represent an existing sample of schools and a structure in which the research findings can be easily disseminated.

The sample includes the fifth and sixth grade students and the entire instructional staff of thirty-six elementary schools (see Table I). Sample schools were identified through a process of self selection. A letter was sent to each elementary school in NIS inviting them to participate in the study. Enclosed with the letter was a self addressed

card on which the school indicated its interest. Letters were mailed to approximately fifty schools and school districts. Of the thirty-seven replies, thirty-five indicated a positive interest to participate. In addition, four Pennsylvania schools and four other Massachusetts schools heard of the study through informal contact with members of the research team. These schools, not in NIS, expressed interest in the study and were subsequently included in the sample because they possessed demographic characteristics that broadened the sample and made it more generalizable. Schools in the final sample represent a wide range of demographic characteristics as reported in Table 1. The sample size for both students and teachers in each school is reported in Table 2.

Instrumentation

The present study used two instruments to assess the educational and organizational environment of elementary schools. The ESES was used to assess the student and teacher perceptions of the elementary school learning environment. The OCDQ was used to assess the teacher perceptions of the organizational climate.

Elementary School Environment Survey (ESES)

The original ESES is an instrument developed by Sinclair in 1969. Building on the work done previously by Pace in measuring college environments, Sinclair adapted the CUES instrument for use in

Table 1

School Demographic Information

Code Number	Type of School	School Enrollment	Approximate Socio-Economic Class	Number of Pupils in School District	Per-Pupil Expenditure	Population of Municipality	Classification of Municipality[1]
000	1-5	440	Lower Middle	3738	$478	15,200	City
001	K-6			6342		40,000	Urban Town
002*	K-8	251	Middle	*	$250*	175,000	City (*Catholic School)
003	K-6	748	Middle	6910	$528	43,000	City
004	K-6	800	Heterogenous	5366	$835	13,000	Town
013	K-5	510	Lower Middle	4699	$716	2,600	Town
014	K-6	433	Upper Middle	2714	$675	5,400	Town
100	K-5	310	Middle	14793	$756	62,000	Urban Town
101	K-6	600	Upper Middle	2714	$675	5,400	Town
102	K-6	380	Middle	386	$612	1,350	Town
103	1-5	723	Lower Middle	4054	$490	18,000	Urban Town
110	1-6	860	Middle	3738	$478	15,200	City
112	K-6	323	Middle	18219	$950	89,000	City
114	1-6	818	Upper Middle	841	$699	1,900	Town
121	1-6	480	Not Given	3561	$515	20,500	Urban Town
200	K-8	435	Middle	*	*	*	*State College Lab School
202	K-6	450	Middle	2698	$800	2,718	Town
203	4-6	390	Upper Middle	992	$850	8,242	Town
212	K-6	225	Lower Middle	3332	$600	19,000	City
213	K-6	271	Middle	3332	$600	19,000	City

Table 1 Continued

Code Number	Type of School	School Enrollment	Approximate Socio-Economic Class	Number of Pupils in School District	Per-Pupil Expenditure	Population of Municipality	Classification of Municipality
300	K-6	465	Upper Middle	7571	$796	31,200	Urban Town
301	K-6			7571	$796	31,200	Urban Town
304	K-6	398	Middle	7571	$796	31,200	Urban Town
311	K-6	489	Middle	7571	$796	31; 200	Urban Town
313	K-6	410	Upper	7571	$796	31,200	Urban Town
330	1-6	350	Middle	2984	$550	600	Town
331	K-6	476	Lower Middle	2984	$550	2,385	Town
332	1-6	345	Middle	2984	$550	5,000	Town
333	1-6	411	Middle	2984	$550	5,000	Town
342	K-6	609	Upper Middle	7571	$796	31,200	Urban Town
343	K-6	345	Upper Middle	7571	$796	31,200	Urban Town
400	1-5	254	Lower Middle	4054	$550	18,000	Urban Town
410	K-5	476	Middle	3187	$517	11,000	Urban Town
411	K-6	547		5800		11,000	Town
420	K-5	364	Lower Middle	14793	$756	62,000	Urban Town
422	K-6	645	Upper Middle	4396		23,200	Urban Town

[1] According to 1970 Edition of the COMMERCIAL ATLAS AND MARKETING GUIDE, Rand McNally & Co.

Table 2

Number of Students and Teachers in Survey Sample in Descending Order of Student Sample Size.

School Number	Student Sample	Teacher Sample
114	225	37
422	219	22
203	211	23
004	202	32
003	201	26
110	190	26
014	181	14
342	167	21
101	162	22
103	140	24
300	137	16
333	137	14
311	133	16
121	127	16
411	125	23
304	113	15
331	101	22
301	100	14
343	98	12
330	97	14
313	92	16
202	91	17
200	89	13
332	88	15
102	83	18
013	81	16
001	79	12
112	78	12
410	78	23
213	59	11
000	54	13
400	50	10
212	49	9
002	46	9
100	35	12
420	27	15

elementary schools. Sinclair's instrument assesses the environment along five variables: Propriety, Community, Awareness, Practicality and Scholarship. The instrument consists of two forty item forms. Sixteen items, eight for each form, load on each environmental variable. The items on the survey describe conditions or behaviors that exists in elementary schools. Respondents are asked to indicate whether the conditions or behaviors exists in their schools by answereing either "true" or "false".

In the original instrument, Sinclair established levels of reliability and validity. A reliability estimate for ESES was computed across schools using the Kuder-Richardson 21 reliability formula. Reliability coefficients were high for Community (.81), Awareness (.85) and Propriety (.86) and moderate for Practicality (.53) and Scholarship (.54). Since the original ESES is a direct adaptation of CUES, Sinclair relied heavily on the content and construct validity established by Pace as a referent. To add strength to construct validity, OCDQ climate scores and ESES variable scores were compared using a Pearson product-moment correlation. These correlations are reported in Table 3. Of the five ESES variables, two yield significant correlation coefficients when compared to the Halpin-Croft climate scores. Practicality correlates negatively with the controled climate and positively with the familiar climate. The highest positive correlation is found between the community press and the familiar climate. Negative

Table 3

Correlations Between ESES Scores and Halpin-Croft Organizational Climate Scores

Halpin-Croft Scores	ESES Scores				
	Practicality	Community	Awareness	Propriety	Scholarship
Open	.21	.35	.04	.02	-.03
Autonomous	.08	.23	.29	.11	.01
Controled	<u>-.49</u>	<u>-.66</u>	.02	.00	-.13
Familiar	<u>.55</u>	<u>.80</u>	.10	.10	.08
Paternal	.34	<u>-.59</u>	-.02	.27	.27
Closed	-.27	-.32	-.09	-.04	.02

N = 16

(Underlined coefficients are significant at $p < .05$).

correlations exist between the community variable and controled and paternal climates. Non-significant correlations between Awareness, Propriety, and Scholarship, and the Climate scores approach significance in the appropriate direction. On the basis of these results, Sinclair concludes that "the results presented here only approach confirming the construct validity of the instrument."[2] Noting Cronbach's observation that"...construct validity is established through a long and continued interplay between observation, reason and imagination."[3] Sinclair recognizes that further work is needed to refine ESES and establish construct validity.

In an attempt to refine the instrument, ESES was administered to 54 schools in the state of Massachusetts. Sadker performed several factor analysis techniques of this data to verify the constructs of the original instrument. As a result of Sadker's analysis, ESES was expanded from five to six variables which have been defined in Chapter I. In addition, the instrument is reduced from two forms of forty items each to one form of forty-two items.

Readibility Index. The Lorge Formula for estimating difficulty of reading material was used to determine the reading level of the

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[2]Sinclair, Elementary School Educational Environment, p. 51.

[3]Lee J. Cronbach, Essentials of Psychological Testing (New York: Harper, 1960), p. 121.

revised ESES. A Readibility Index (R. I.) of 4. 47 was obtained which describes the estimated reading grade level of the instrument. This indicates that the material in the revised ESES is within the reading comprehension of the average fourth grade child. It should be noted that:

> The Lorge Formula is based on a criterion derived from responses to questions of the five types (specific details, general import, appreciation, knowledge of vocabulary, and understanding of concepts). It tends, therefore, to overestimate the difficulty of passages to be read primarily for appreciation as for general import; and it tends to underestimate the difficulty of passages to be read primarily for specific details or for following directions. Nevertheless, the Lorge Formula provides an overall estimate which should be useful in grading materials.[4]

The above statement about the Lorge Formula indicates that considered care should be taken when interpretating the Readibility Index. At best it is an estimate and not a rigorous determination. Table 4 reports the computations for the Readibility Index.

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[4]Lorge, Irving, The Lorge Formula for Estimating Difficulty of Reading Materials, (New York: Bureau of Publication, Teachers College, Columbia University, 1959).

Table 4

Computation of Readibility Index Using the Lorge Formula

Number of words in the sample:		474
Number of sentences in the sample:		42
Number of prepositional phrases in the sample:		36
Number of hard words in the sample:		49
Average sentence length:	$\frac{474}{42}$ X .06	.6760
Ratio of prepositional phrases:	$\frac{36}{474}$ X 9.55	.7260
Ratio of hard words:	$\frac{49}{474}$ X 10.43	1.0810
Constant:		1.9892
Readibility Index:		4.4722

Scoring ESES The method of scoring ESES has become a major concern in the present study because of the data analysis procedures that are employed. The method established in the original instrument and used most often has been "66 plus 33 minus." This scoring method consists of assigning a plus one to each item that 66 percent of the students responded to in the keyed direction and a minus one to each item which 33 percent or less of the students respond in the keyed direction. The score of each variable is obtained by summing the item scores for each variable and adding a constant to eliminate negative numbers.

Another scoring procedure uses the percent of students responding

to an item in the keyed direction as the item score. The variable score is composed of the mean of the item scores that make up a particular variable. An advantage in this procedure is that a more precise description of the student responses is possible. However, in both procedures, the variable score is derived by tallying and converting to percents student responses across items. Neither procedure uses individual student scores for each variable as a way to derive school scores.

For the purpose of the present study, it is desirable to have individual student scores on each variable. For this reason a third scoring technique was derived. Responses in the keyed direction are considered correct responses. The sum of the correct responses for a particular variable constitutes the student score for that variable. Individual student scores are then summed and a mean calculated to derive a school score for each variable. Individual student scores will be used in the data analysis procedures to determine the variance between student and teacher perceptions and to determine congruence between student and teacher perceptions.

Reliability and Validity of the Revised ESES A reliability estimate for the revised ESES was established by McKay in his study of school environments. According to Pace and Stern, it may not be appropriate to obtain reliability estimates for instruments such as ESES in the conventional manner.[5]

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[5] C. Robert Pace and George G. Stern, "An Approach to the Measurement of Psychological Characteristics of College Environments," p. 272.

> The usual formulas for estimating reliability test-retest, split-halves, KR formulas, and so forth--are all based on the variance of scores and are not applicable to estimating the reliability of a score at a single school.... (CUES scores)... are based on the logic of consensus, not the logic of variance. Consensus is the opposite of variance.[6]

Accordingly, McKay obtained an estimate of the internal consistency of each factor by correlating each item score within a factor with the average score for that factor. An average correlation was then computed for each factor. This value represents the degree of relationship between items within a factor and the average score on the factor and is taken as an indication of factor homogeneity. Table 5 and 6 present the results of the analysis.[7]

Three approaches are used to determine validity of the revised form of ESES. First, content validity is considered. Sinclair, in the initial research of elementary environments, reports:

> The instrument used in this study is an adaptation of the instrument used by Pace in his studies of college and university environments. Pace, in a rigorous analysis of the psychometric properties of the College and University Environment Scales finds that the substance or content of the measure is representative of the environment being judged. This suggests that the instrument can be judged

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[6]C. Robert Pace, College and University Environment Scales: Technical Manual, (Princeton: Educational Testing Services, 1969), pp. 42-43.

[7]A. Bruce McKay, "Principals, Teachers and Elementary Youth: Measurement of Selected Variables of Teacher Principal Social, Interaction and Educational Environment" (Unpublished Ed. D. dissertation, University of Mass., 1971), p. 65.

Table 5

Product-Moment Correlations Between Factor Items and Average Factor Score

	Average Factor Score					
Item No.	Alien-ation	Human-ism	Anaton-omy	Morale	Oppor-tunism	Re-source
1	.42					
2	.46					
3	.68					
4	.71					
5	.71					
6	.83					
7	.78					
8		.75				
10		.45				
11		.69				
12		.15				
13		.70				
14		.28				
15			.71			
16			.91			
18			.76			
19			.43			
20			.70			
21			.52			
22				.65		
23				.16		
25				.88		
26				.54		
27				.77		
28				.88		
29				.62		
30					.32	
31					.18	
32					.70	
33					-.05	
34					.38	
35					.52	

Table 5 Continued

Item No.	Average Factor Score: Alienation	Humanism	Anatonomy	Morale	Opportunism	Resource
37						.37
38						.67
40						.43
41						.67
42						.44

Table 6

Mean Correlation* Between Factor Items and Factor Score

	Factor: Alienation	Humanism	Anatonomy	Morale	Opportunism	Resource
Mean Correlation of Factor Items	.68	.54	.71	.70	.37	.53

*To determine mean correlation values, each item correlation reported in Table 8 was first converted to its 2-score equivalent. 2-scores were then averaged, with the result converted back to its corresponding r score. The non-linenity of correlation scores necessitated this procedure.

to have a high degree of content validity.[8]

In addition to assuming a transfer of content validity from CUES to ESES, Sinclair made a systematic effort to check his assumption of content validity. A preliminary testing of ESES in four schools supported the relevance of the relationship between the statements and the measured environmental variables. It is assumed that content validity for ESES can transfer to revised ESES. However, a systematic effort was made to analyze ESES for content validity.

As the instrument was being administered to over four thousand students and over six hundred teachers, the research team discovered that the meaning of certain items needed further clarification. Items that generated the most questions and comment are as follows:

12. Students do not get any special favors in this school.

14. Many of the teachers go out of their way to help students.

25. Teachers seldom take their classes to the library so that students can look up information.

48. Students that the principal and teachers know will have it easier in this school.

Apparent confusion about the meaning of these items constitutes a threat to content validity. Further, the instrument was examined to determine if the items in the instrument represent characteristics of the defined environmental variables. A systematic examination of items for face validity indicates that the items reflect the appropriate environmental

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[8] Sinclair, "Elementary School Environment," p. 48.

variable, with the exception of the following item:

15. Most of the teachers in this school are unfriendly.

The above item was placed with the environmental variable Resource. It was determined that the item would be placed more appropriately under the environmental variable Morale.

Construct validity for ESES was established by McKay through a replication of the factor analysis procedures used by Sadker. To generate the instrument used in the present study. Sadker applied several factor analysis techniques to the original ESES data. It seems reasonable to assume that if Sadker's constructs are valid, they should stand up when the same factor analysis procedures are replicated with new data. McKay employed a replication of Sadker's procedures using ESES data gathered for the present study. However, he faced two delimitations in his analysis. First, Sadker used two separate populations in his study; students who completed Form A and students who completed form B of ESES. A separate factor analysis was performed on each population and the results combined to form the new instrument.[9] McKay's analysis used a single population. Second, when using factor analysis procedures, it is highly desirable to have a sample twice as large as the number of variables. Since this was not possible in McKay's analysis, one can expect spurious loadings. Both delimitations work

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[9]Sadker, "Schools as Seen by Children," p. 61.

against obtaining favorable results from the factor analysis. Thus, if favorable results are achieved under the circumstances, added confidence can be placed in the constructs.

In both Sadker's original study and McKay's replication, an orthogonal axis analysis of the verifax program and a generalized Harris-Kaiser oblique analysis were used. The results of the replication procedures yield strong support for the six factors derived by Sadker. Given the delimitations in McKay's replication, which mitigate against favorable comparisons, it can be assumed with confidence that ESES is judged to have construct validity. Table 7 and 8 present the results of McKay's replication.

Additional support for validity can be established by determining the degree of relationship between a defined construct and measures of other identifiable features of the sample schools. Since Halpin-Croft OCDQ scores are available for each school, relationships between the revised ESES and OCDQ subtest scores may be considered to have a bearing on the predictive validity of ESES. A Pearson product-moment correlation was conducted on both teacher scores and student scores with OCDQ subtests. The results of both analysis are reported in Tables 9 and 10. Although correlation coefficients in this analysis are not very high, several significant correlations occur in the appropriate direction. Alienation has a positive correlation with disengagement and Hindrance and a negative correlation with Espirit, Thrust and

Table 7

Comparison of Communalities*

Item	Factor					
	Alienation	Humanism	Autonomy	Morale	Opportunism	Resource
1	.87 (.84)					
2	.78 (.64)					
3	.83 (.56)					
4	.82 (.73)					
5	.63 (.60)					
6	.84 (.86)					
7	.72 (.72)					
8		.75 (.57)				
9		.62 (.63)				
10		.77 (.57)				
11		.70 (.83)				
12		.60 (.51)				
13		.83 (.65)				
14		.76 (.84)				
15			.76 (.75)			
16			.81 (.75)			
17			.64 (.38)			
18			.68 (.74)			
19			.72 (.74)			
20 (New)			-- (.46)			
21 (New)			-- (.73)			
22				.81 (.76)		
23				.82 (.66)		
24				.72 (.51)		
25				.82 (.74)		
26				.72 (.87)		
27				.80 (.79)		
28				.63 (.74)		
29					.75 (.40)	
30					.79 (.48)	
31					.74 (.62)	
32 (New)					-- (.80)	
33 (New					-- (.55)	
34 (New)					-- (.82)	
35 (New)					-- (.66)	

Table 7 - Continued

Item	Factor					
	Alien-ation	Human-ism	Auton-omy	Morale	Oppor-tunism	Re-source
36						.80 (.40)
37						.69 (.55)
38						.81 (.66)
39						.68 (.70)
40						.58 (.77)
41 (New)						-- (.45)
42 (New)						-- (.74)

*Two communality values are reported for all items except these newly created by Sadker. Values in parentheses are those obtained by the present cross-validation.

Table 8

Comparison of Factor Loadings *

Item	Factor					
	Alien-ation	Human-ism	Auton-omy	Morale	Oppor-tunism	Re-source
1	.96 (.86)					
2	.85 (.73)					
3	.76 (.63)					
4	.66					
5	.54					
6	.72 (.89)					
7	.70 (.79)					
8		.77 (.36)				
9		.66 (.36)				
10		.55 (.33)				
11		.46				
12		.42				
13		.90 (.72)				
14		.76 (.33)				
15			.82 (-.65)			
16			.57 (-.72)			
17			.53 (-.49)			
18			.50 (-.74)			
19			.50 (-.41)			
20 (New)			--			
21 (New)			-- (-.78)			
22				.78 (-.43)		
23				.48		
24				.43		
25				.78 (-.77)		
26				.58 (-.73)		
27				-.55 (.35)		
28				.42 (-.76)		
29					.81	
30					.78	
31					-.37	
32 (New)					-- (-.54)	
33 (New)					--	
34 (New)					--	
35 (New)					-- (-.51)	

Table 8 - Continued

Item	Factor					
	Alienation	Humanism	Autonomy	Morale	Opportunism	Resource
36						-.76 (.43)
37						-.51 (.56)
38						-.40
39						-.37
40						-.35 (.72)
41 (New)						--
42 (New)						-- (.82)

*Where possible, two factor loadings are reported for each item. Factor loadings in parentheses are those obtained by the present cross-validation. Those items receiving less than .30 loading are not reported.

Consideration. Humanism and Morale have negative correlations with Disengagement and Hindrance and positive correlations with Espirit, Thrust and Consideration. For teachers, Antonomy has a positive correlation with Espirit and Intimacy. Resource has a positive correlation with Espirit. The results of this analysis, when compared the Halpin-Croft comparisons of the original ESES, withstand the test of predictive validity with greater significance. Thus, increased confidence can be placed in the validity of ESES.

Organizational Climate Description Questionnaire (OCDQ)

The OCDQ is an instrument developed by Halpin and Croft to quantify the organizational climate of elementary schools by assessing teacher-teacher and teacher-principal interaction. It measures the climate along eight factors or subtests which in turn describe one of six climate types (see Chapter I). As was mentioned earlier, however, the individual subtest scores are a more valid description of the climate than the climate scores. For this reason only the subtest scores will be used in the present study.

The OCDQ instrument is a questionnaire containing sixty-four statements of behaviors or conditions that exist in elementary schools. Teachers respond on a four point scale ranging from rarely occurs (1) to very frequently occurs (4). Each item score loads on one of eight subtests: Disengagement, Hindrance, Esprit, Intimacy, Aloofness, Production emphasis, Thrust and Consideration.

Table 9

Correlation Between OCDQ Subtests

and Teacher ESES Scores

ESES Variables	OCDQ Subtests							
	Disengagement	Hindrance	Espirit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Alienation	.56	.50	-.48	-.17	-.23	.27	-.56	.55
Humanism	-.55	-.51	.66	.24	.16	-.17	.43	.45
Antonomy	-.22	-.26	.56	.46	-.20	-.12	.22	.32
Morale	-.48	-.57	.54	.23	.09	-.12	.57	.52
Opportunism	.27	.18	-.02	.21	-.22	-.11	-.06	.02
Resource	-.26	-.19	.60	.26	.06	-.08	.14	.20

(Underlined coefficients are significant at $p < .01$)

Table 10

Correlation Between OCDQ Subtests

and Student ESES Scores

ESES Variables	OCDQ Subtests							
	Disengagement	Hindrance	Espirit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Alienation	.58	.61	-.53	-.10	-.13	.28*	-.43	-.36
Humanism	-.53	-.44	.45	.12	.15	-.10	.50	.37*
Antonomy	.17	.21	.08	.11	-.37*	-.14	-.18	-.03
Morale	-.55	-.71	.42	.20	.13	.07	.43	.39
Opportunism	.07	.18	.02	-.10	-.24	-.10	.01	.04
Resource	-.24	-.28*	.41	.06	.17	-.02	.09	.18

(Underlined coefficients are significant at $p < .01$)
(Underlined coefficients with an asterisk are significant at $p < .05$)

The validity of OCDQ was established several ways in a study by Andrews.[10] First, OCDQ scores were intercorrelated to determine if reasonable relationships existed among the subtests. "Of the 36 relationships in the matrix, 20 are significant and are uniformly in the expected directions."[11] Second, a more stringent comparison was made between OCDQ scores and staff characteristics. Subtest scores were correlated with median grade level, number of teachers, years of training, and percentage of males. The result of this analysis indicates that "the OCDQ in its relationships with the characteristics of school staff, demonstrated a large number of relationships which were consistent with theory, some which were equivocal, and none which were inescapably inconsistent."[12] Third, meaningful relationships were established between the Myers-Briggs personality types and OCDQ subtest scores, although no overall relationship was found between the principal's personality type and the climate. Several other relationships were explored in the study, all supporting to a greater or lesser extent the validity of the OCDQ subtest scores.

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[10] Andrews, John H. M., School Organizational Climate: 'Some Validity Studies," Canadian Education and Research Digest, (December, 1965), pp. 319-334.

[11] Ibid., p. 324.

[12] Ibid., p. 326.

Data Collection Procedures

Four sets of data are gathered for analysis in the present study. First, a face sheet completed by the principal of each school was used to determine the nature of the school population, the school organization, and the school community. Second, ESES was administered to the fifth and sixth grade students in each school. Third, a teacher form of ESES was administered to the instructional staff of each elementary school. Fourth, the OCDQ was administered to the instructional staff of each elementary school. A copy of each is included in Appendix A, B and C.

A team of four individuals was used to gather data in the selected schools. General guidelines were established for administering the ESES to students and the ESES and OCDQ to teachers to guard against possible contamination of data. The guidelines are as follows:

1. An individual from the team administered the instruments to the students and teachers.

2. Teachers were invited to leave the room when the ESES was administered to students. If they chose to remain they were discouraged from engaging with the students in any way after the initial directions were given and the students were responding to the survey items. With a few exceptions this guideline was realized.

3. The person administering the instruments began by introducing himself to the group. He directed his behavior toward creating a relaxed, non-threatening rapport with the students. The survey administrator read the directions aloud as the students followed in their

booklets. The group completed the first six biographical items and a sample question together. When it was clear that the students understood what was to be done, they proceeded to respond to the survey items.

4. If students had questions about the meaning of certain words, phrases or sentences the team member would attempt to answer the question without providing additional or expanded interpretation to the sense of a phrase or sentence. In the case of particular words or phrases, a literal interpretation or substitution would be used, e.g. "similar" means the "same as", and "go out of their way" means "to do more than they would need to." When a question indicated a difficulty on the part of the respondent to make a decision, the individual was encouraged to respond according to his own reaction. In the latter case a typical reply to a student or teacher might be, "Whatever you think it means."

6. Both teachers and students were encouraged to proceed at a relaxed pace and turn in their forms as soon as they completed the instrument. The booklets and answer sheets were collected as soon as they were completed.

The school principal of each school arranged the schedule for administering the survey instrument. Students completed the survey during the school day in their classroom, the school library, a multiple purpose room, or some other location where the noise level and external interference would be at a minimum. The survey was administered ac-

cording to the guidelines listed above. Responses to each item were recorded in the appropriate place on the answer sheet: "1" for "true" and "2" for "False".

Teachers completed the ESES and the OCDQ in group settings either at the beginning or the end of the school day, depending on the scheduling demands of a particular school. After an initial introduction and a brief explanation of the purpose of the research effort the teachers were asked to read the directions and to complete each questionnaire; OCDQ first and ESES second.

Analysis of the Data

Three approaches were used to examine the hypotheses stated earlier. First analysis of variance was used in two ways to determine if students and teachers differ significantly in their perceptions of the educational environment. The school scores for students and teachers make up two cells of a one way analysis of variance for each variable. Thus, it can be determined whether student and teachers differ across schools. In addition, separate analysis of variance was performed between the individual student and teacher scores for each variable within each school. A determination was made in this analysis whether student and teacher perceptions differ within individual schools. The results of both analysis of variance procedures were used to test the first hypothesis.

Several analysis procedures were used to test the second and third hypothesis. First, an analysis of variance was used to determine if a significant difference existed between the numeric difference (subsequently known as difference score) of schools in which both students and teachers scored high and schools in which both students and teachers score low on a particular variable. Second, a Pearson product-moment correlation was run on both teacher variable scores and difference scores and student variable scores and difference scores. This analysis was used to add further support to the analysis of variance findings and to examine directional relationships between variable scores and difference scores.

The third analysis procedure examined the relationship between teacher perceptions of the organizational climate and difference scores of ESES variables. For this purpose a Pearson product-moment correlation was employed. The results of this analysis lead to the acceptance or rejection of the fourth and fifth hypothesis.

CHAPTER IV

ANALYSIS AND INTERPRETATION

Chapter 4 presents, analyzes and interprets the Elementary School Environment Survey data gathered from students and teachers in thirty-six sampled schools. In addition, the results of this analysis are examined in light of the Organizational Climate Description Questionaire data collected from the teachers in the sampled schools. The analysis employed is as follows. First, student and teacher scores are examined to determine if significant differences exist between student and teacher perceptions of each environmental variable. This analysis leads to the acceptance or rejection of the first hypothesis. Second, difference scores will be compared with variable scores to determine if the difference between student and teacher perception of each variable is related to student and teacher variable scores. This analysis answers the second and third hypothesis. Acceptance or rejection of the fourth and fifth hypothesis is accomplished by examining the correlations between ESES difference scores and the OCDQ subtest scores. In this analysis the relationship between the amount of student and teacher agreement on ESES variables and several components of the organizational climate is explored.

Significance of Student and Teacher Difference

In order to determine if students and teachers perceive the environment to be significantly different, an analysis of variance was performed on the ESES data in two ways. First, the thirty-six school scores for students and teachers made up two cells of a one way analysis of variance design. The results of this analysis was designed to determine whether student and teacher perceptions of each variable differed significantly across schools. Second, the individual student and teacher scores for each variable within a single school make up two cells of a one way analysis of variance design. The results of this analysis determine if within each school students and teachers differ significantly in their perception of each variable. In addition, student and teacher scores and measures of central tendency were examined to see if teachers score consistantly higher or lower than students on particular variables.

Alienation

Alienation describes the school in terms of student involvement and a sense of belonging. A low score on this factor suggests that students sense a congenial and cohesive atmosphere which is characterized by togetherness. A high score demonstrates a feeling of estrangement. The results of the analysis of variance between school scores indicated that student and teacher perceptions of the environmental

factor Alienation were significantly different beyond the .01 level of confidence. Table 11 presents the results of the analysis across schools.

Table 11

Analysis of Variance Between Student and Teacher Perception of Alienation Across Schools

Source of Variation	Sums of Squares	df	Mean Squares	F ratio
Between	2922.30	1	2922.30	38.87*
Within	5262.08	70	75.17	
Total	8184.38	71		

*p<.01

An analysis of the differences between student and teacher perception of Alienation within individual schools, indicated that in a majority of cases significant differences exist. In sixteen schools the difference between student and teacher perception of Alienation was significant at the .01 level. In seven schools the difference in perception of Alienation was significant beyond the .05 level. In thirteen schools no significant differences exist between student and teacher perception of the environmental variable Alienation. The results of the analysis within schools and across schools both support the first hypothesis that students and teachers view the

environment in different ways.

Not only were student and teacher perceptions of Alienation significantly different, but the direction of the difference was consistant. With one exception, student scores for Alienation were higher than teacher scores. In other words, students perceived the school environment as a less congenial and involving place than teachers. Student scores range from 22.4 to 46.6 with a mean of 32.5 and a standard deviation of 6.3. Teacher scores range from 4.9 to 40.8 with a mean of 19.8 and a standard deviation of 10.53. Table 12 presents the student and teacher scores, difference scores and analysis of variance results for Alienation.

Humanism

Humanism reflects a concern for the individual as expressed in the school environment. A high score on humanism indicates an environment that places value on creativity and aesthetic expression as well as individuality. Analysis of variance across schools indicated that students and teachers perceived the school to be significantly different with respect to Humanism beyond the .01 level. Table 13 presents the analysis of variance findings for students and teachers across schools.

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Allienation

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
013	29.5	31.0	1.5	1/95	.068	--
100	21.4	23.5	2.1	1/45	.120	--
014	40.8	36.4	-4.4*	1/193	.535	--
411	29.2	34.1	4.9	1/146	.865	--
213	16.8	22.5	5.7	1/68	2.37	--
202	38.0	44.2	6.2	1/106	.76	--
410	23.1	30.9	7.8	1/99	.865	--
103	26.8	35.5	8.7	1/161	2.82	--
101	36.6	45.4	8.8	1/184	3.966	.05
121	22.3	32.0	9.7	1/141	1.31	--
300	18.8	29.4	10.6	1/151	2.78	--
333	23.2	34.0	10.8	1/149	3.12	--
212	13.1	26.6	13.5	1/56	1.87	--
332	16.2	29.9	13.5	1/56	1.87	--
342	9.6	23.4	13.8	1/186	8.55	.01
000	23.1	37.0	13.9	1/69	4.64	.05
343	17.9	31.9	13.9	1/108	5.19	.05
330	12.1	26.7	14.6	1/109	9.817	.01
331	22.7	37.4	14.7	1/121	4.59	.05
311	12.2	27.1	14.9	1/147	8.255	.01
003	19.8	34.9	15.1	1/225	12.40	.01
001	13.1	28.7	15.6	1/89	4.27	.05
112	6.0	22.4	16.4	1/88	8.16	.01
422	21.1	37.8	16.7	1/239	6.24	.05
004	4.9	22.8	17.9	1/232	24.65	.01
400	19.0	38.3	18.3	1/58	6.53	.05
304	12.4	30.9	18.5	1/126	13.74	.01
203	18.6	35.2	18.6	1/232	13.96	.01
301	11.2	29.8	18.6	1/128	17.17	.01
102	27.9	46.6	18.7	1/99	9.05	.01
114	13.5	33.8	20.3	1/260	30.86	.01
002	4.9	26.7	21.8	1/53	12.52	.01
313	9.5	32.0	22.5	1/106	17.17	.01
200	7.1	32.8	25.7	1/100	13.59	.01
420	7.6	36.9	29.3	1/40	26.51	.01
110	10.5	41.3	30.7	1/214	38.045	.01
Mean	19.8	32.5				
S. D.	10.5	6.3				

*Minus sign indicates teacher score higher than student score.

Table 13

Analysis of Variance Between Student and Teacher Perception of Humanism Across Schools

Source of variance	Sums of squares	df	Mean squares	F Ratio
Between	5482.79	1	5482.79	87.11*
Within	4405.63	70	62.94	
Total	9888.42	71		

*$p < .01$

Examination of the analysis of variance between students and teachers within individual schools indicated that in a majority of schools the perception of Humanism between students and teachers are significantly different. Twenty three schools had different scores that were beyond the .01 level of confidence. Six schools ha scores beyond .05 level of condifence. In only seven schools was there no significant difference between student and teacher scores. It can be safely concluded from both analysis of variance procedures for Humanism, that students and teachers perceive the environment to be significantly different, thus supporting the first hypothesis.

The difference between student and teacher scores also had a directional tendency. Across all schools, teacher scores were higher than student scores, indicating that teachers see the

school as a place with more concern for the individual and man's creativity than do students. Student scores range from 42.4 to 63.4 with a mean of 51.4 and a standard deviation of 5.6. Teacher scores range from 46.4 to 85.2 with a mean of 69.9 and a standard deviation of 9.7. Table 14 presents student and teacher scores, difference scores, and analysis of variance findings for each school.

Autonomy

Autonomy in a school environment reflects the degree of independence and initiative a student is encouraged or allowed to express. A high score on Autonomy indicates a climate marked by an emphasis on individual differences and the free expression of these differences. Analysis of variance across schools indicated that students and teachers perceive the school environment in significantly different ways ($p < .01$). Table 15 presents the analysis of variance findings.

Table 15

Analysis of Variance Between Student and Teacher Perception of Autonomy Across Schools

Source of Variance	Sums of Squares	df	Mean Squares	F Ratio
Between	2869.03	1	2869.03	30.05*
Within	6683.90	70	95.48	
Total	9552.93			

*$p < .01$

Table 14

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Humanism

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
420	80.6	45.2	35.4	1/40	20.19	.01
112	89.5	57.2	32.3	1/88	26.39	.01
311	78.6	52.9	25.7	1/147	16.54	.01
304	74.4	49.1	25.3	1/126	14.74	.01
410	72.5	47.7	24.8	1/99	18.50	.01
330	83.3	59.0	24.3	1/109	12.31	.01
301	81.0	56.8	24.2	1/128	17.07	.01
342	80.8	57.6	23.1	1/186	17.98	.01
313	72.6	50.2	22.6	1/106	14.49	.01
422	61.4	38.8	22.6	1/239	24.92	.01
110	65.7	43.8	21.9	1/214	19.04	.01
003	79.9	58.0	21.9	1/225	17.39	.01
002	85.2	63.4	21.8	1/53	7.91	.01
332	71.1	49.8	21.3	1/101	11.75	.01
114	69.9	48.8	21.1	1/260	25.13	.01
343	69.4	50.4	19.0	1/108	6.30	.05
001	73.6	55.2	18.4	1/89	5.79	.05
300	71.9	53.1	17.8	1/151	8.40	.01
212	71.7	54.3	17.4	1/56	5.96	.05
103	70.1	53.9	16.1	1/161	11.85	.01
333	67.7	51.9	15.8	1/149	6.96	.01
411	67.4	51.6	15.8	1/146	11.38	.01
121	65.0	49.3	15.7	1/141	7.62	.01
202	59.3	43.7	15.6	1/106	4.59	.05
203	60.9	46.1	14.8	1/232	9.80	.01
102	60.0	45.2	14.8	1/99	4.99	.05
331	62.9	48.8	14.1	1/121	5.49	.05
004	71.8	57.7	14.1	1/232	9.51	.01
400	62.6	50.2	12.4	1/58	2.77	--
000	53.9	42.4	11.5	1/65	2.38	--
213	70.0	61.0	9.0	1/68	13.40	.01
200	62.5	53.8	8.7	1/100	2.94	--
013	57.3	50.9	6.4	1/95	1.17	--
014	46.4	50.7	4.3	1/193	.45	--
100	61.1	57.4	3.7	1/45	.43	--
101	48.4	45.0	3.4	1/184	1.48	--
Mean	68.9	51.4				
S. D.	9.7	5.6				

Examination of the analysis of variance between student and teacher perceptions within individual schools supports the findings across schools. Fifteen schools yielded significant differences beyond the .01 level of confidence. In six schools the difference between student and teacher perception differed beyond the .05 level. The analysis of fifteen schools indicated that no significant differences existed between student and teacher perception of the school with respect to the Autonomy factor. Although fifteen schools revealed no significant differences, the analysis of variance across schools and a majority of the analysis results within schools indicate that students perceive the variable Autonomy differently than teachers, thus supporting the first hypothesis that students and teachers differ in their perception of the environment.

An examination of student and teacher scores reveals that without exception teachers scored higher on Autonomy than students. Teacher scores range from 44.2 to 89.2 with a mean of 66.2, and a standard deviation of 10.6. Student scores range from 43.0 to 70.6 with a mean of 53.6 and a standard deviation of 8.9. Table 16 presents the student and teacher scores, difference scores, and the analysis of variance within schools for Autonomy.

Morale

Morale involves a student's attitude toward school. A high score on Morale reflects the presence of a friendly and cheerful

Table 16

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Autonomy

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
213	65.2	32.8	32.4	1/68	10.62	.01
004	87.2	59.6	28.2	1/68	10.62	.01
112	89.2	61.4	27.8	1/88	17.19	.01
420	80.4	54.2	26.2	1/40	22.25	.01
100	82.0	61.8	20.2	1/45	14.24	.01
002	65.3	45.7	19.6	1/53	6.78	.01
343	68.1	49.1	19.0	1/108	8.36	.01
301	66.7	47.9	18.8	1/128	26.11	
103	62.5	44.2	18.3	1/161	16.42	.01
410	66.0	48.0	18.0	1/99	14.20	.01
110	69.3	52.4	16.9	1/214	16.33	.01
001	66.7	50.1	16.6	1/65	6.82	.05
342	66.1	50.0	16.1	1/186	10.69	.01
203	70.2	55.4	14.8	1/232	9.18	.01
102	72.5	60.2	12.3	1/99	6.20	.05
003	58.9	46.8	12.1	1/225	8.32	.01
332	64.4	53.2	11.2	1/101	3.55	--
311	69.1	58.0	11.1	1/147	3.80	--
114	63.0	51.9	11.1	1/260	9.63	.01
422	75.0	64.4	10.6	1/239	4.45	.05
300	73.0	62.4	10.6	1/151	4.41	.05
000	57.7	47.7	10.0	1/65	2.35	--
013	69.8	59.9	9.9	1/95	4.07	.05
400	58.7	49.3	9.4	1/58	1.80	--
330	50.0	40.6	9.4	1/109	2.19	--
304	76.7	67.9	8.8	1/126	3.09	--
101	76.1	67.4	8.7	1/184	3.87	--
411	79.0	70.5	8.5	1/146	9.87	.01
331	67.4	60.4	7.0	1/121	3.42	--
200	52.8	45.9	6.9	1/100	1.31	--
202	55.7	49.1	6.6	1/106	1.27	--
212	49.3	43.0	6.3	1/56	.83	--
014	66.7	61.6	5.1	1/193	.82	--
313	67.6	63.4	3.2	1/106	.02	--
333	49.0	46.4	2.6	1/149	.37	--
121	44.2	44.2	0.0	1/141	.07	--
Mean	66.23	53.6				
S.D.	10.6	9.9				

school climate. Analysis of variance between student and teacher perceptions across schools indicated that students and teachers perceive the environmental factor Morale to be significantly different beyond the .01 level. Table 17 presents the analysis of variance findings.

Table 17

Analysis of Variance Between Student and Teacher Perception of Morale Across Schools

Source of Variation	Sums of Squares	df	Mean Square	F ratio
Between	8098.4	1	8098.4	87.00*
Within	6523.52	70	93.19	
Total	14621.92	71		

*$p < .01$

The analysis of variance between student and teacher scores within schools suggests that in 30 schools the difference between student and teacher scores was significant beyond the .01 level. Two schools yielded differences beyond the .05 level and only four schools registered no significant differences between student and teacher scores. The results of both analysis of variance procedures indicate that students and teachers differ to a very great extent with regard to their perception of Morale. This lends further support

to the first hypothesis that students and teachers differ significantly in their perception of the environment.

By examining student and teacher scores it can be noted that teachers scored higher on Humanism than students. Teacher scores range from 47.0 to 95.2 with a mean of 72.5 and a standard deviation of 11.3. Student scores range from 39.7 to 66.7 with a mean of 51.3 and a standard deviation of 7.6. Table 18 presents student and teacher scores, difference scores and analysis of variance findings within schools for the variable Morale.

Opportunism

The variable Opportunism describes behavior which adapts to expediency or circumstance. A high score on this factor indicates a school climate in which knowing how to behave with powerful and important people is one key to academic and social success. The analysis of variance across schools shows that there was no significant difference between student and teacher perceptions of the variable Opportunism. Student and teacher perceptions of the school with regard to Opportunism were about the same. Table 17 presents the results of the analysis of variance across schools for Opportunism.

Table 18

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Morale

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
304	80.9	45.9	35.0	1/126	41.49	.01
400	82.4	47.7	34.7	1/58	16.33	.01
420	85.7	51.8	33.9	1/40	52.74	.01
110	75.4	42.1	33.3	1/214	65.00	.01
002	95.2	62.7	32.5	1/53	20.06	.01
313	80.9	50.2	30.7	1/106	23.74	.01
311	74.9	44.4	30.5	1/147	37.08	.01
004	90.6	60.2	30.4	1/232	61.00	.01
001	87.9	57.9	30.0	1/89	20.90	.01
301	79.6	51.2	28.4	1/128	28.84	.01
003	80.2	51.8	28.4	1/225	34.20	.01
332	75.2	47.7	27.5	1/101	27.79	.01
114	75.0	47.9	27.1	1/260	59.44	.01
101	69.9	42.6	26.3	1/182	17.74	.01
342	79.9	54.7	25.2	1/186	21.00	.01
112	88.3	63.5	24.8	1/88	13.36	.01
121	67.6	43.3	24.3	1/141	18.94	.01
200	71.4	47.7	23.7	1/100	14.86	.01
203	72.0	48.9	23.1	1/232	12.47	.01
202	67.6	39.7	22.9	1/106	16.50	.01
330	87.9	66.1	21.8	1/109	11.01	.01
103	69.7	48.9	20.8	1/161	19.00	.01
422	69.5	49.2	20.3	1/239	20.76	.01
343	67.9	48.0	19.9	1/108	11.20	.01
300	68.8	50.6	18.2	1/151	8.75	.01
331	62.4	44.8	17.6	1/121	16.38	.01
335	67.7	52.6	15.1	1/149	10.82	.01
102	55.7	40.8	14.9	1/99	12.04	.01
212	82.6	67.7	14.9	1/56	3.76	--
410	74.5	62.5	12.0	1/99	18.72	.01
411	64.5	52.8	10.7	1/146	9.79	.01
100	71.4	60.9	10.5	1/45	2.34	--
213	70.2	63.9	6.3	1/68	5.86	.05
000	58.2	42.8	5.4	1/65	6.78	.05
014	47.0	43.8	3.2	1/193	.32	--
013	54.5	52.3	2.2	1/95	2.20	--
Mean	72.5	51.3				
S. D.	11.3	7.6				

Table 19

Analysis of Variance Between Student and Teacher Perception of Opportunism Across Schools

Source of Variance	Sums of Squares	df	Mean Squares	F Ratio
Between	30.55	1	30.55	1.25*
Within	1705.48	70	24.36	
Total	1736.03	71		

* not significant

The results of the analysis of variance within schools supports the results reported for differences among schools. In only one school did students and teachers perceive the variable to be significantly different beyond the .01 level. In three schools student and teacher perceptions were different beyond the .05 level. The remaining thirty-two schools yielded no significant differences between student and teacher perception of Opportunism. It can be assumed from both analysis of variance procedures that students and teachers view the school in much the same way with regard to Opportunism. This finding rejects the first hypothesis. A comparison of the differences between student and teacher scores reveals that in twenty-one schools teachers scored higher on Opportunism than students. This suggests a tendency for students to view the school to be

somewhat less Opportunistic than teachers. The mean for students(45.8)and teachers(47.1) also suggest this tendency. Teacher scores range from 31.9 to 60.7 with a mean of 47.1 and a standard deviation of 6.3. Student scores range from 41.2 to 54.2 with a mean of 45.8 and a standard deviation of 2.5. Table 20 presents student and teacher scores, difference scores, and analysis of variance findings within schools for Opportunism.

Resource

The factor Resource reflects the amount of learning resources available to students. A high score on this factor suggests that resources such as written materials, field trips, television and exhibits are readily available for student use. The availability of friendly and helpful teachers is also considered under Resource. The analysis of variance across schools reveals that students and teachers were significantly different in their perception of Resource beyond the .01 level of confidence. Thus, students and teachers perceive the environment to be significantly different with regard to Resource. Table 21 presents the results of the analysis of variance across schools.

Table 20

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Opportunism

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
410	31.9	45.8	13.9	1/99	.09	--
100	57.0	43.6	-13.4*	1/45	5.00	.05
342	55.7	43.0	-12.7*	1/186	.00	--
203	55.8	45.2	-10.6*	1/232	8.65	.01
213	50.0	41.5	- 8.5*	1/68	.53	--
000	39.8	47.2	8.4	1/65	.49	--
202	49.1	41.4	- 7.7*	1/106	1.56	--
411	56.6	49.3	- 7.3*	1/146	4.37	.05
313	44.5	51.5	7.0	1/106	2.11	--
212	49.8	43.0	- 6.8*	1/56	1.26	--
101	60.7	54.2	- 6.5*	1/182	.18	--
330	36.3	42.3	6.0	1/109	.02	--
013	51.8	46.0	- 5.8*	1/95	2.36	--
103	52.8	47.1	- 5.7*	1/161	2.64	--
004	50.4	44.7	- 5.7*	1/232	3.97	.05
333	48.9	43.7	- 5.2*	1/149	1.53	--
003	36.5	41.4	4.9	1/225	1.90	--
400	37.6	42.0	4.4	1/58	.55	--
002	37.0	41.2	4.2	1/53	.49	--
422	44.7	48.8	4.1	1/239	.09	--
300	52.1	48.1	- 4.0*	1/151	.92	--
112	51.6	47.8	- 3.8*	1/88	.26	--
121	41.8	45.3	3.5	1/141	.00	--
200	50.0	46.6	- 3.4*	1/100	1.08	--
114	48.2	45.1	- 3.1*	1/260	.79	--
311	47.6	44.6	- 3.0*	1/147	.00	--
001	43.0	45.7	2.7	1/89	.26	--
301	44.1	46.3	2.2	1/128	.14	--
014	50.0	47.9	- 2.1*	1/193	.24	--
304	46.7	48.7	2.0	1/126	.21	--
102	47.5	45.6	- 1.9*	1/99	.27	--
110	48.7	47.0	- 1.7*	1/214	.23	--
331	43.1	44.5	1.4	1/121	.03	--
332	45.6	47.0	1.4	1/101	.12	--
420	50.0	48.6	- 1.4*	1/40	.09	--
343	48.6	48.6	0	1/108	.00	--
Mean	47.1	45.8				
S. D.	6.3	2.5				

*Minus sign indicates teacher score higher than students score.

Table 21

Analysis of Variance Between Student and Teacher Perception of Resource Across Schools

Source of Variance	Sums of Squares	df	Mean Square	F Ratio
Between	789.37	1	789.37	7.99
Within	6917.63	70	98.82	
Total	7708.00	71		

*p<.01

An examination of the analysis of variance between students and teachers within schools indicated that in a majority of schools no significant differences exist between student and teacher perception of Resource. Twenty-four schools yielded no significant differences while only twelve show that differences do exist; seven at the .05 level and 5 at the .01 level. It should be noted that in several instances the F ratio for within schools analysis of variance approached the .05 level of significance. Consequently, it can be stated that as a result of the across schools analysis and the tendency of the within schools analysis, students and teachers perceived in the environmental factor Resource in significantly different ways. Thus, analysis of the Resource variable supports the first hypothesis.

However, it is not possible to have as much confidence in the difference between student and teacher perception of Resource as it is with the variables Alienation, Humanism, Autonomy and Morale.

An analysis of student and teacher scores indicated that with four exceptions teachers score higher than students. In other words, teachers saw the school as providing a greater number of materials and experiences than did students. Teacher scores range from 46.7 to 93.8 with a mean of 73.8 and a standard deviation of 11.9. Student scores range from 47.4 to 85.0 with a mean of 67.2 and a standard deviation of 7.5. Table 22 presents student and teacher scores, difference scores, and analysis of variance findings within schools for Resource.

Summary

Considering the results of analysis of variance between students and teachers both across schools and within schools, it is possible to accept the first hypothesis; students and teachers differ significantly in their perception of the environment. In addition, it can be noted that teachers score significantly higher on Humanism, Autonomy, Morale, and Resource and lower on Alienation than do students. Although teachers tended to score higher on Opportunism than students, little confidence can be placed in this difference since the differences between student and teacher perception of Opportunism is not statistically significant.

Teacher Scores, Student Scores, Difference Scores and Analysis of Variance for Resource

School Number	Teacher Score	Student Score	Difference	Degrees of Freedom	F ratio	Significance Level
103	84.2	63.2	21.0	1/161	17.39	.01
003	85.4	66.3	19.1	1/225	17.43	.01
343	91.6	72.9	18.7	1/108	6.84	.05
342	90.4	73.3	17.1	1/186	9.38	.01
304	81.3	64.3	17.0	1/126	6.05	.05
300	88.8	74.2	14.6	1/151	5.23	.05
301	77.1	62.5	14.6	1/128	15.69	.01
014	55.7	68.3	-13.6*	1/193	3.35	--
013	88.9	75.7	13.2	1/95	6.59	.05
313	84.0	71.6	12.4	1/106	5.34	.05
311	85.7	73.9	11.8	1/147	3.02	--
101	77.1	66.1	11.0	1/182	4.26	.05
002	83.8	73.0	10.8	1/53	2.03	--
420	71.7	61.7	10.0	1/4	6.63	.05
203	67.0	58.7	9.3	1/232	2.43	--
330	87.5	78.6	8.9	1/109	2.28	--
410	70.2	61.3	8.9	1/99	3.80	--
004	93.8	85.0	8.8	1/232	7.35	.01
112	76.6	68.1	8.5	1/88	1.88	--
331	67.3	75.4	-8.1*	1/121	2.71	--
332	81.3	73.6	7.7	1/101	1.28	--
212	58.3	65.9	-7.6*	1/56	.75	--
422	74.2	65.6	7.6	1/239	3.28	--
110	71.1	64.0	7.1	1/214	1.67	--
001	65.0	72.0	-7.0*	1/89	1.17	--
213	68.3	61.4	6.9	1/68	1.40	--
411	75.3	69.6	5.7	1/146	1.88	--
400	50.0	54.5	-5.5*	1/58	.32	--
102	69.5	64.8	4.7	1/99	.36	--
202	58.9	54.7	4.2	1/106	.07	--
121	65.0	61.0	3.5	1/141	.47	--
333	71.3	67.9	3.4	1/149	.24	--
114	71.1	68.6	2.5	1/260	.16	--
100	76.5	74.1	2.4	1/45	.15	--
000	57.4	58.9	-1.5*	1/65	.24	--
200	46.7	47.4	-.7*	1/100	.03	--
Mean	73.8	67.2				
S. D.	11.9	7.5				

*Minus sign indicates teacher score higher than students score.

Comparison of Difference Scores and Student and Teacher Variable Scores

The analysis in this section sought to reveal the relationship between the degree to which students and teachers perceive environmental variables to be similar (difference scores) and student and teacher variable scores. The following hypotheses were tested.

1. Teachers and students that score low on Opportunities and Alienation will have more similarity in their perception of Opportunism and Alienation than teachers and students that score high.
2. Teachers and students that score high on Autonomy, Morale, Humanism, and Resource will have more similarity in their perception of Autonomy, Morale, Humanism, and Resource than students and teachers that score low.

For purposes of this analysis a criterion was established for scores which are considered high and low. Since the revised ESES was used for the first time in the present study, no data is available for comparison with scores in the present sample. Therefore, an internal criterion was used as the basis for determining high and low scores. The following criterion was selected:

1. Students that score above the mean of student scores for a particular variable are considered high scores.

2. Students that score below the mean of student scores for a particular variable are considered low scores.
3. Teachers that score above the mean of teacher scores for a particular variable are considered high scores.
4. Teachers that score below the mean of teacher scores for a particular variable are considered low scores.

Table 23 presents the number of schools which fit these criterion.

Table 23

Number of Schools Scoring High and Low for ESES Variables and the Mean of Their Difference Scores

Variable	Number of Schools Scoring High	Mean of the Difference Scores	Number of Schools Scoring Low	Mean of the Difference Scores
Alienation	14	15.0	12	11.8
Humanism	13	20.5	12	13.1
Autonomy	15	13.2	15	10.5
Morale	11	25.5	13	18.5
Opportunism	9	4.6	10	3.8
Resource	14	10.6	12	5.0

Analysis of variance was performed on the difference scores between schools in which both students and teachers scored high and in which both students and teachers scored low. The results of this analysis are presented in Table 24. The difference scores between high and low scoring students and teachers were different Humanism and Resource at the .01 level and for Morale at the .05 level. In each case the mean of the difference scores of high scoring schools was greater than the mean of the difference scores of low scoring schools. From these two observations it can be stated that for both Humanism and Resource that the difference between student and teacher perception was significantly greater in schools where students and teachers scored high and significantly smaller in schools where students and teachers scored low. The second hypothesis states that scores for Humanism, Autonomy, Morale and Resource will be high in schools where student and teacher perception of these variables is similar. The analysis suggests the opposite. In schools where scores were high for Humanism, Morale and Resource, difference in student and teacher perception is greatest. Thus, the second hypothesis was not supported by this analysis. In the case of Autonomy, no significant differences existed between the means of the difference scores for high scoring students and teachers and low scoring students and teachers. However, the F ratio indicated that the difference between

Table 24

Analysis of Variance Between Difference Scores in High and Low Scoring Schools

Source of Variance	Sums of Squares	d f	Mean Square	F Ratio
		Alienation		
Between	65.49	1	65.48	3.23*
Within	486.22	24	20.26	
Total	551.70	25		
		Humanism		
Between	336.57	1	336.57	9.38***
Within	825.63	23	35.90	
Total	1162.20	24		
		Autonomy		
Between	54.95	1	54.95	1.09*
Within	1407.35	28	50.26	
Total	1462.29	29		

Table 24 Continued

Source of Variance	Sums of Squares	d f	Mean Square	F Ratio
		Morale		
Between	292.08	1	292.08	5.25**
Within	1224.24	22	55.00	
Total	1516.31	23		
		Opportunism		
Between	2.57	1	2.57	.30*
Within	152.46	18	8.47	
Total	155.03	19		
		Resource		
Between	146.45	1	146.45	9.93***
Within	353.82	25	14.74	
Total	500.27	26		

* not significant
** $p \leq .05$
*** $p < .01$

the means was close to significance in a direction opposite from that hypothesized.

An analysis of the difference scores for Alienation and Opportunism suggests that no significant differences existed between the means of the difference scores for students and teachers that score high and for students and teachers that score low. However, it should be noted that the F ratio for Alienation (3.23) was close to significance in the opposite direction from that hypothesized.

The third hypothesis states that scores for Alienation and Opportunism will be low in schools where student and teacher perception of Alienation and Opportunism is similar. The results of the analysis of differences did not support the third hypothesis.

Another way to look at the difference scores between students and teachers is to plot both student and teacher scores for each variable across schools. Figures 1 through 6 represent the profiles of scores across schools for each variable. In each figure school scores were placed in order of the difference between student and teacher scores. The schools on the left side of the figure had the greatest difference between student and teacher scores. The schools on the right side of the figure had the least difference.

The profile for the variables Humanism, Resource and Morale had some strickingly similar characteristics. First,

Figure 1

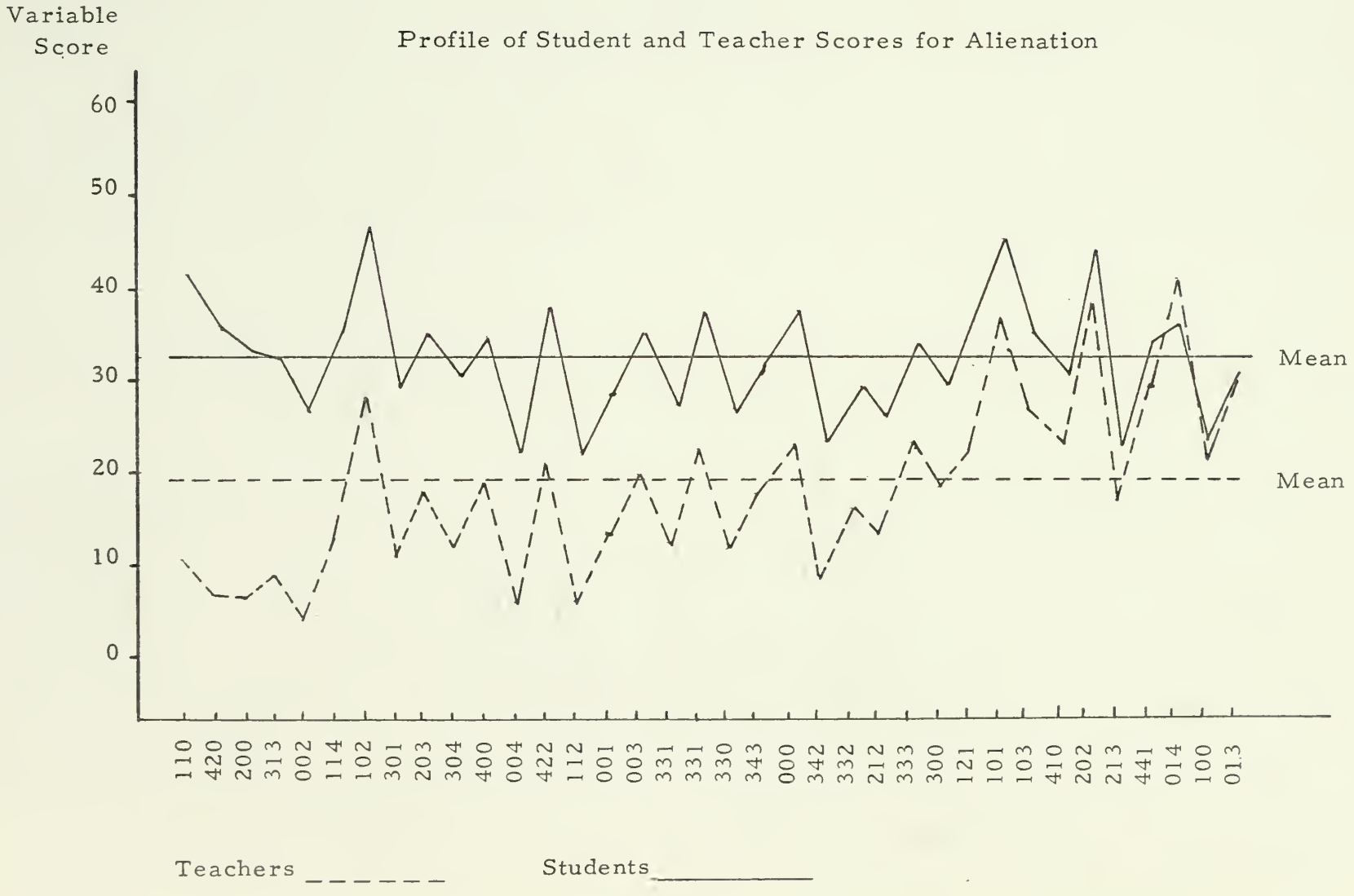

Variable Score
Profile of Student and Teacher Scores for Alienation
60
50
40
30
20
10
0
Mean
Mean
110 420 200 313 002 114 102 301 203 304 400 004 422 112 001 003 331 331 330 343 000 342 332 212 333 300 121 101 103 410 202 213 441 014 100 013
Teachers _ _ _ _ _ _
Students_____

Figure 2

Profile of Student and Teacher Scores for Humanism

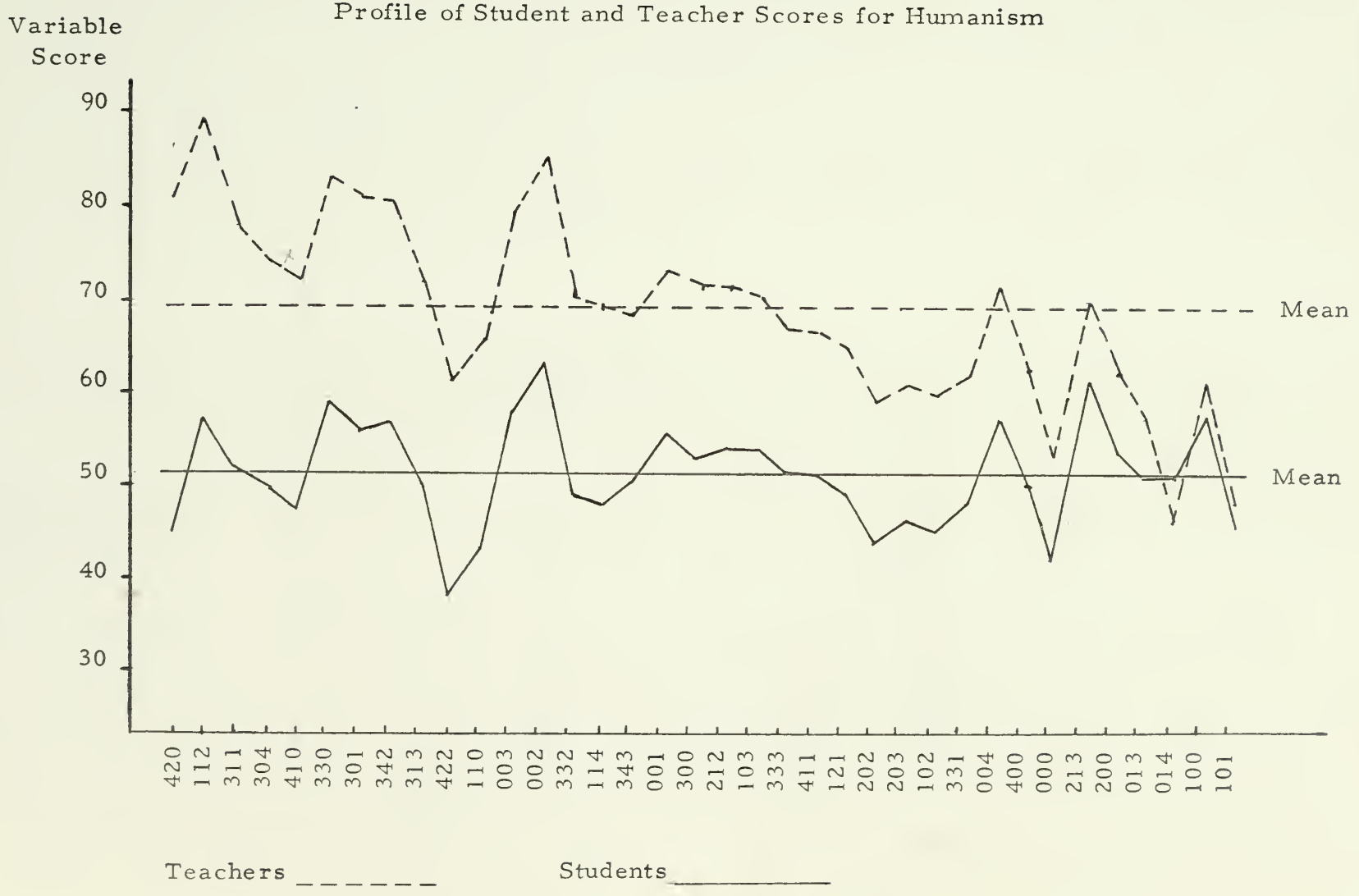


Figure 3

Profile of Student and Teacher Scores for Autonomy

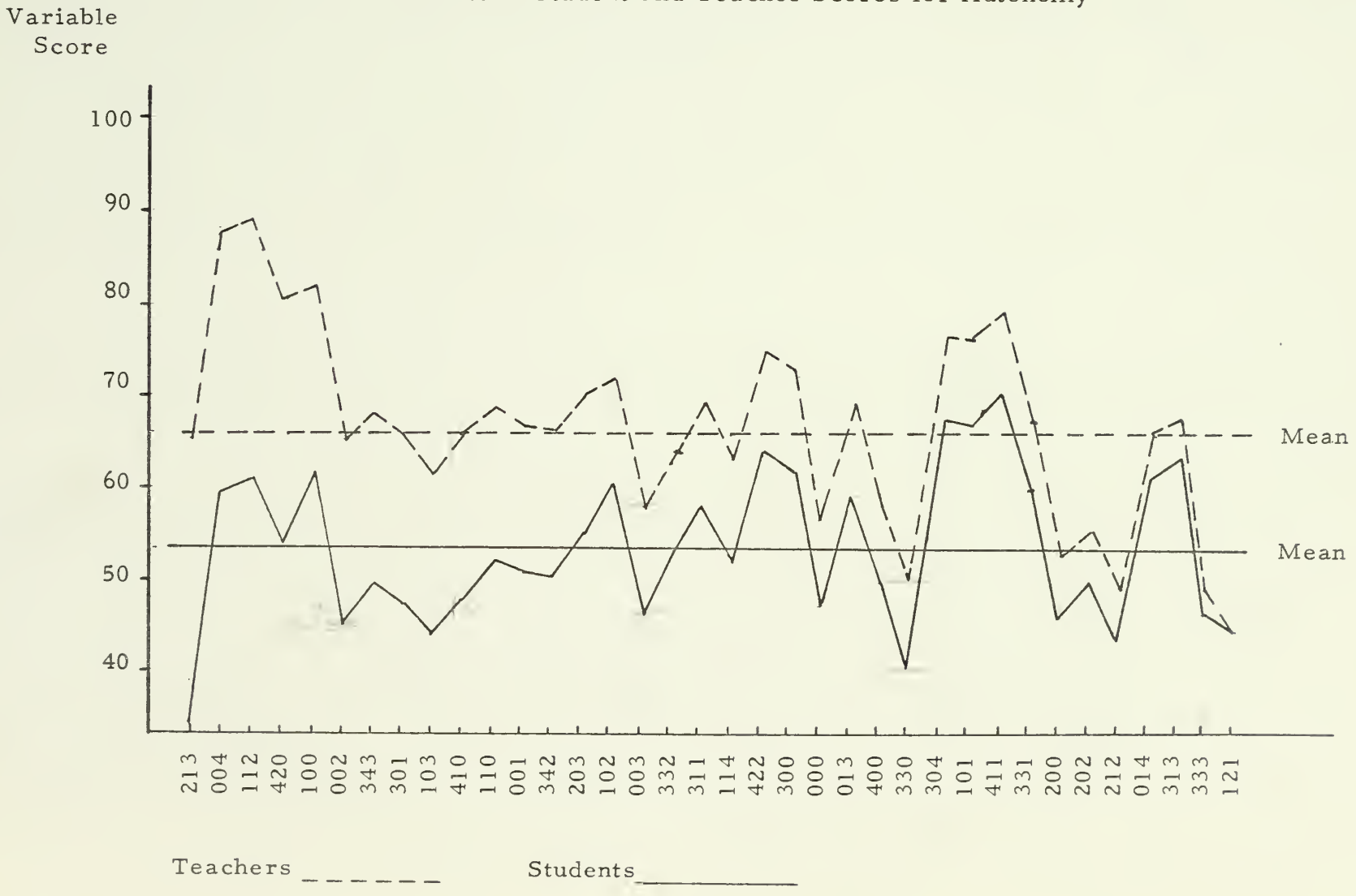


Figure 4

Profile of Student and Teacher Scores for Morale

Figure 5

Profile of Students and Teacher Scores for Opportunism

Figure 6

Profile of Student and Teacher Scores for Resource

consistant with the analysis of variance results, schools on the left side of the profile, representing schools with the greatest difference scores, had higher variable scores than schools on the right side of the profile. This observation adds support to the notion that schools which scored high on Morale, Humanism and Resource had a greater difference in their scores than schools which score low. Although the difference scores for high and low scoring students and teachers on the factor of Autonomy were not significantly different, the profile for Autonomy and F ratio (1.09) described a pattern approaching that of Humanism, Resource and Morale.

The profile for Alienation portrays a similar pattern to the variables mentioned above, but in the opposite direction. As the difference scores become smaller, student and teacher scores are higher. The Opportunism profile revealed no discernable pattern or tendency in reference to difference scores.

Further observations can be made from the profile of student and teacher scores across schools. The profile of student scores for each variable revealed that moving from left to right student scores deviated evenly from the mean. In other words an imaginary line that would trace the direction of student scores was parallel to or coinsided with the mean. On the other hand, the profile of teacher scores for the variables Autonomy, Humanism, Morale, Resource and Alienation gravitate towards the mean of

student scores. In each case, as the perceptions of students and teachers become more similar, teacher scores approach the mean of student scores. An imaginary line tracing the line of teacher scores moves away from the mean of teacher scores in the direction of the student scores. The profile for Opportunism displays an even variation from the mean for both student and teacher scores.

A Pearson product-moment correlation between difference scores and teacher variable scores and between difference scores and student variable scores added further evidence to this relationship. Teacher variable scores were correlated with difference scores for Alienation (-.72), Humanism (.76), Autonomy (.57), Morale (.71), and Resource (.63) beyond the .01 level. One student variable score was correlated with difference score Resource (.34) beyond the .05 level. Tables 25 and 26 present the results of this analysis.

Analysis of Individual Statements

A basic assumption of the ESES is that each statement answered in the keyed direction contributes to a particular variable score with a similar level of responce. For instance, in a school that is theoretically free of all signs of alienation, the keyed score for each Alienation statement would be zero. Similarly, by examining the distribution of school responses for each statement it is possible to detect those items which share the greatest concensus

Table

Correlation Between Teacher ESES

Scores and Difference Scores

ESES Variable Scores	ESES Difference Scores					
	Alienation	Humanism	Antonomy	Morale	Opportunism	Resource
Alienation	-.72	-.51	-.43	-.59	.16	-.03
Humanism	.40	.76	.44	.49	-.09	.31*
Antonomy	.04	.10	.57	.09	-.02	.21
Morale	.52	.56	.42	.71	-.02	.12
Opportunism	-.25	-.32*	.12	-.15	.13	.05
Resource	-.07	.27*	.31*	.19	.02	.63

(Underlined coefficients are significant at $p < .01$)
(Underlined coefficients with an asterisk are significant at $p < .05$)

Table

Correlation Between Student ESES

Scores and Difference Scores

ESES Variable Scores	ESES Difference Scores					
	Alienation	Antonomy	Humanism	Morale	Opportunism	Resource
Alienation	.10	-.13	<u>-.43</u>	.02	-.27	-.14
Humanism	-.12	-.02	<u>.38</u>	.06	.15	.25
Antonomy	-.09	-.07	-.17	.02	-.11	.09
Morale	-.11	.11	<u>.47</u>	-.15	<u>.34*</u>	-.02
Opportunism	.06	-.03	-.06	.11	-.26	.11
Resource	-.11	-.02	.13	-.08	-.02	<u>.34*</u>

(Underlined coefficients are significant at $p < .01$)
(Underlined coefficients with an asterisk are significant at $p < .05$)

among schools and those items that have the greatest power to differentiate. In addition, comparing student and teacher responces on statements provides greater insight to the cause of significant differentiation. Tables 27 through 32 present the distribution of statement responses for each variable. With a few exceptions, the distribution of statement responses of Humanism, Autonomy, Morale and Resource indicated that teachers scored higher on these variable items than students. For Alienation the distribution of statement scores for teachers is lower than it is for students. The distrubution of responses to statements for Opportunism are highly irregular and will be discussed later.

Two statements in the Humanism variable have a distribution of student scores which are higher than teacher scores.

14. Students often interrupt while someone else is talking.

15. This school teaches students to be polite.

In each case, the statement reflects the behavior of students. Thus students viewed themselves more favorably on these items than teachers. In statement 41 teacher behavior receives the most attention.

41. If students are unhappy in school, the teacher will call their parents.

On this item student responses were well below teacher responses.

Table 27

Distribution of School Responses
on Alienation Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
		Teachers									
3	T	5	5	6	4	7	5	2	2		
7	F	10	7	3	2	1	6	4	1		
17	F	11	10	4	5	2	1		1		
27	T	9	13	8	4						
29	T	12	5	5	7		3	2			
33	T	27	5	2							
40	F	32	2								
		Students									
3	T			4	10	11	10	1			
7	F		1	4	3	6	9	7	5	1	
17	F		3	15	14	3	1				
27	T		10	16	9	1					
29	T		2	9	10	9	5	1			
33	T	3	15	15	3						
40	F	3	12	15	5	1					

Table 28

Distribution of School Responses
on Humanism Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
		Teachers									
10	F						5	4	6	11	8
14	F	2	3	6	13	3	4	2	1		
15	T			1	1	1	5	8	3	10	5
18	T					2		9	13	1	9
25	F			2	1	5	2	11	10	2	1
41	T						3	1	9	11	10
		Students									
10	F			2	1	7	15	7	1	2	
14	F			8	6	16	4	1	1		
15	T					4	5	12	14	5	1
18	T					4	15	10	5	2	
25	F			1	1	11	15	6	2		
41	T		2	17	14	3					

Table 29

Distribution of School Responses
on Autonomy Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
		Teachers									
2	F				1	1	6	7	4	8	7
4	T			2	4	3	12	5	3	3	2
11	T			2	1		4	8	8	3	8
24	F							1	2	18	13
32	F				1	3	6	5	11	7	1
39	F		2	3	4	7	7	6	2	1	1
		Students									
2	F		1	1	4	9	6	14	1		
4	T		2	6	5	8	8	5	2		
11	T		1	1	3	7	6	9	5		
24	F					2	6	14	13	1	
32	F			3	10	13	9	1			
39	F				2	9	15	10			

Table 30

Distribution of School Responses
on Morale Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
		Teachers									
9	F									7	29
16	T			1			1	4	12	10	8
21						4	5	6	13	6	2
23	F	1	2	2	8	9	3	4	2	2	2
26	F					1	5	4	3	11	12
35	F						1	2	3	9	21
36	T		2	3	7	7	2	6	3	5	1
		Students									
9	F							1	10	17	8
16	T						3	4	18	8	3
21	F	1	3	15	10	3	3	1			
23	F		5	13	9	5	4				
26	F			9	10	12	3	1	1		
35	F				2	5	9	9	6	5	
36	T		2	14	14	3	2	1			

Table 31

Distribution of School Responses
on Opportunism Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
Teachers											
12	T	22	12	1	1						
13	T					2	5	11	9	6	3
22	T		1				2	4	11	10	8
28	T									1	35
31	F	26	8								
38	F	7	10	9	5	1	2	2			
Students											
12	T		10	25		1					
13	T							1	5	28	2
22	T				3	8	10	14	1		
28	F						2	13	13	8	
31	F	7	21	8							
38	F		9	17	10						

Table 32

Distribution of School Responses
on Resource Statements

Item No.	Key	Per Cent									
		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100
		Teachers									
5	T				1	3	4	4	6	9	9
20	F				2	4	3	7	5	8	7
30	T		1	1		1	6	7	5	7	8
34	T				1	1	8	7	7	9	3
37	T			1	1		2	2	2	6	20
		Students									
5	T							7	8	16	5
20	F				1	6	3	9	13	4	
30	T			1	2	3	4	9	11	3	3
34	T				3	4	10	9	9	1	
37	T		1		6	6	2	5	5	7	4

Thus, students tended to see themselves in a more favorable light than they see teachers and vise versa.

The same phenomena was observed in statement 16 under Morale.

16. Many students help each other with their class work.

In the six other Morale statements, descriptions reflect student reaction to various aspects of the school or the teacher. In statement 16, students reacted to their relationship with other students. The distribution of student responses for this statement roughly match the distribution of teacher responses. Thus, students viewed the factor of Morale higher among themselves than they did between themselves and the school or the teacher.

One statement in the Resource factor provided another example of the distribution of student scores that are higher than teacher scores. In statement 5, students saw themselves functioning with more freedom that did teachers.

5. Students may take books from the library shelves without the help of the librarian or teacher.

The distribution of scores for Opportunism are at the high end of the scale for particular items and at the low end of the scale

for others. The following statements scored high for both students and teachers.

13. Students know who the most important people in this school are.

22. Students know when they can get away with doing something wrong.

28. It is difficult for students to get the teachers to like them.

Students scored higher than teachers on item 13, suggesting that students perceive the school as a very political place. Teachers scored higher than students on statements 22 and 28. In statement 22 this suggests teachers perceive students as more conniving than students perceive themselves. In statement 28 a high teacher score suggests that teachers view themselves as more friendly individuals than students view them. The remaining three items for Opportunism are scored low by both students and teachers. These items are:

12. One way to get good grades in this school is to be nice to the teacher.

31. The teachers usually check to make sure that students finish their school work.

38. When students do something wrong they usually get caught.

The spurious distribution of both student and teacher scores

raise several important questions. First, do the statements for Opportunism accurately reflect the construct defined as Opportunism? Further reliability and validity work needs to be done to answer this question. Second, if the construct is a relatively sound one, is the school skitzoid and/or ambivilant with regard to Opportunism? If the latter is true, it would be important to investigate the effects of this environmental phenomena on behavior and learning.

School Environment Patterns Across Variables

A sample of thirty-six schools offers a wide range of schools to examine school profiles across variables. The student and teacher scores for each school were plotted. Two criterion guided the selection of profile patterns. First, the relationship between the variables was viewed separately for students and teachers. Second, the comparative difference between student and teacher scores moving from variable to variable was explored. An examination of school profiles is a useful way to analyze the similarity of perceptions between students and teachers across all variables. It places the variables in context with each other, and provides a visual representation of the data.

According to the criterion established above five basic patterns emerge from among the schools, with slight variations within each pattern. One school represented by Figure 7 did not fit any of the six patterns. One characteristic of this school is that student and

teacher perceptions are closer across all variables than any other school. In addition, this is the one school that deviated from the 35 other schools in that teachers scored higher on Alienation and lower on Humanism than did students.

The five school patterns are represented in Figures 8 through 11. One school is selected to represent each pattern group. Patterns of each school are presented in Appendix D.

Pattern 1. In this pattern, both teacher and student scores are higher for Autonomy than for Humanism and Morale. Teacher and student scores vary in parallel fashion for Humanism, Autonomy and Moral, but converge on Opportunism.

Pattern 2 Pattern 2 is identified by noting the relation of Humanism and Morale to the other variables. With a few exceptions the scores on Alienation and Autonomy are lower than either Humanism or Morale scores. The score for Resource is at the same level or higher than the Humanism and Morale scores for students or teachers or both. Four variations of this pattern related to the Opportunism and Resource scores are as follows:

-- Teachers score lower on Opportunism and higher on Resource.

-- Teachers score higher on Opportunism and higher on Resource.

-- Teachers score lower on Opportunism and higher on Resource.

-- Teachers score higher on Opportunism and lower on Resource.

Pattern 3 Scores for teachers in this pattern are similar to pattern 2 Humanism, Morale and Resource scores are higher than Alienation, Autonomy and Opportunism scores. However, student scores for Autonomy are higher than scores for Humanism and Morale. The difference between student and teacher perception is noticeably greater for Humanism and Morale than for Autonomy.

Pattern 4 The scores for Humanism, Autonomy and Morale are at relatively the same level for either students or teachers or both in this profile. Alienation and Opportunism scores are lower than and Resource scores even with or higher than Humanism, Autonomy and Morale scores. In pattern 4 schools, a very great difference exists between the student and teacher perception of Humanism, Autonomy and Morale.

Pattern 5 In the last pattern Autonomy and Resource scores are high for both students and teachers. Humanism and Morale scores are below Autonomy and Resource scores.

Figure 7

School Environment Pattern Across
Variables for Students & Teachers
Pattern 6
School 014

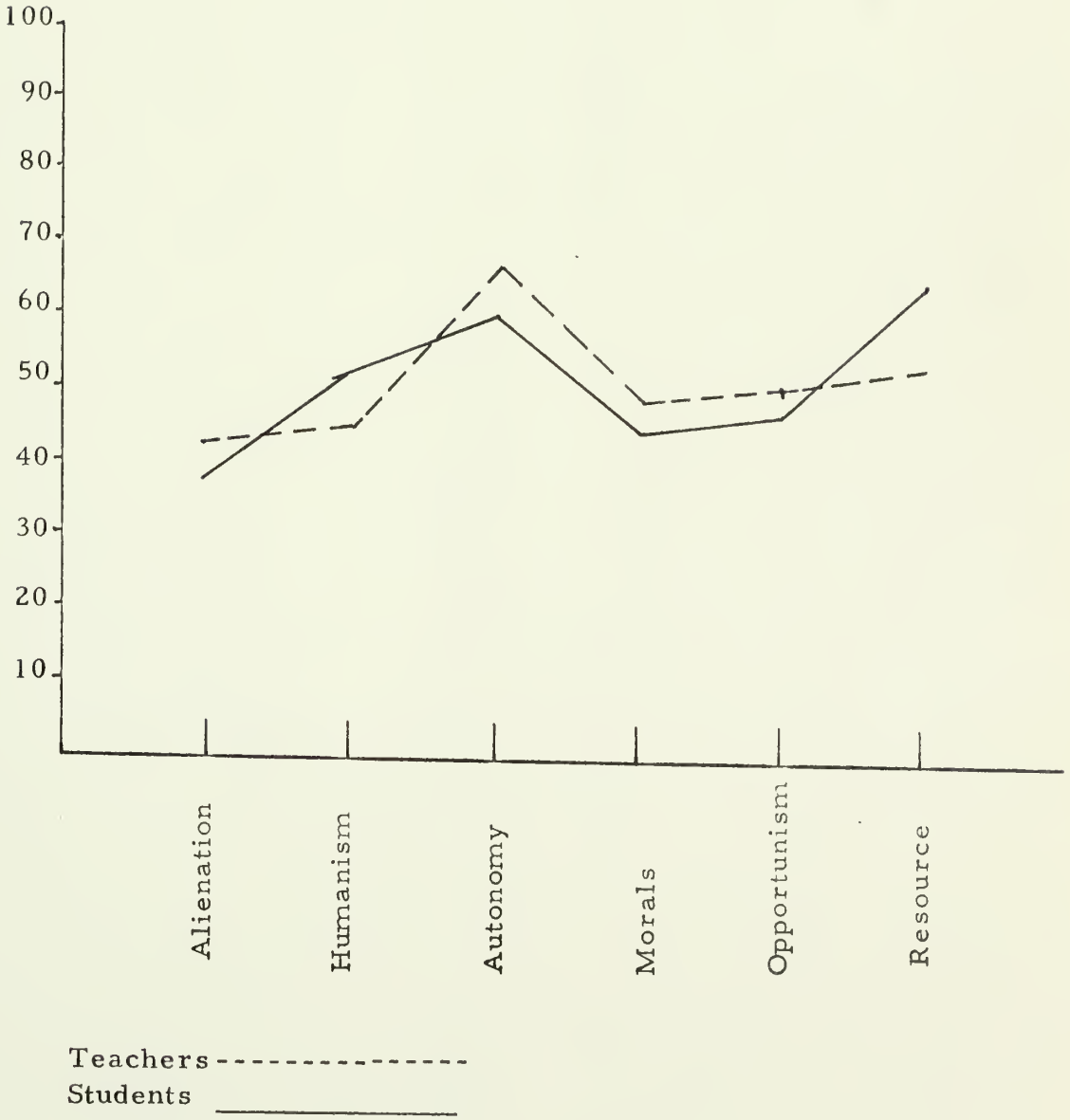


Figure 8

School Environment Pattern Across
Variables for Students & Teachers
Pattern 1
School 102

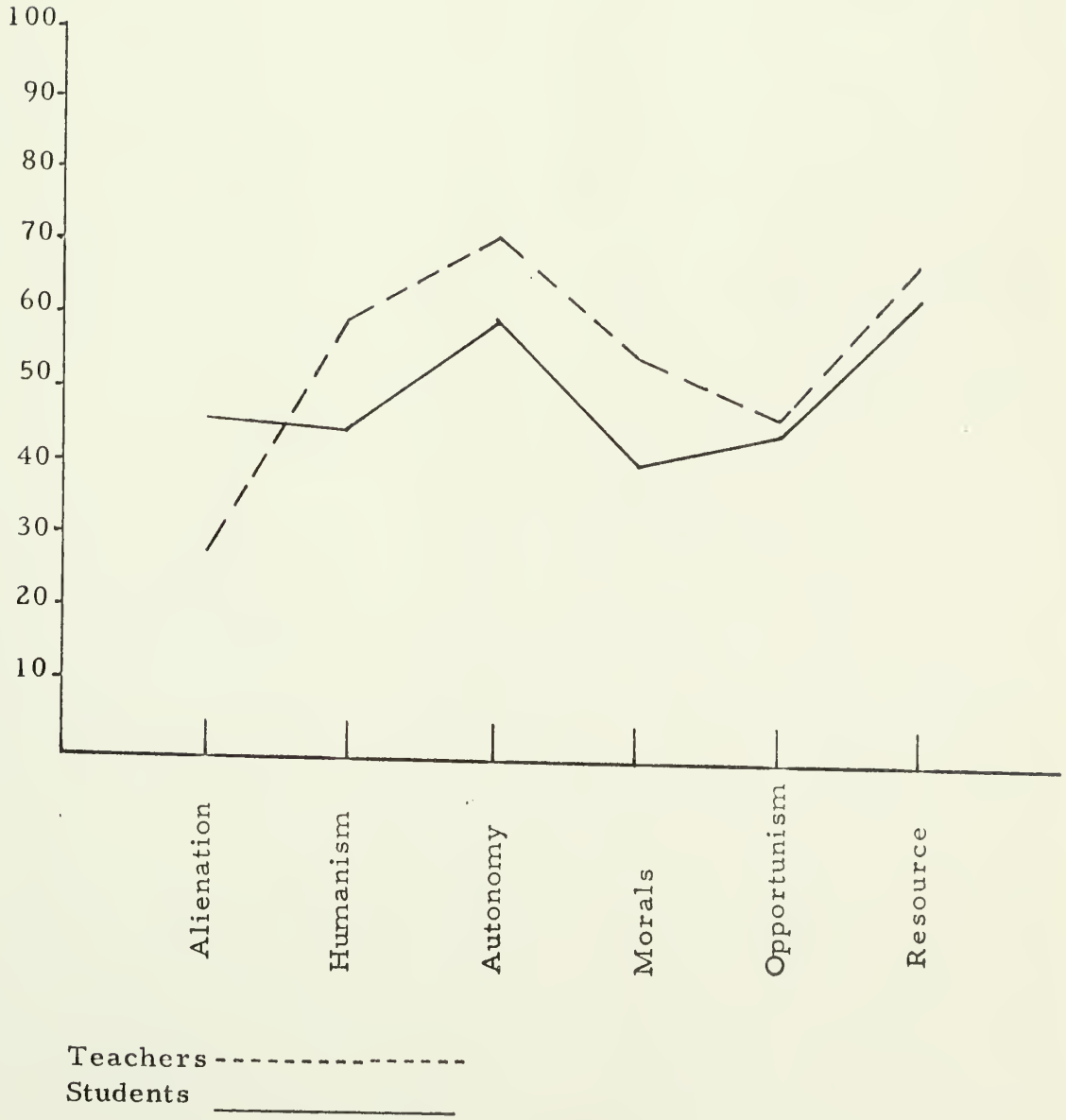


Figure 9

School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 002

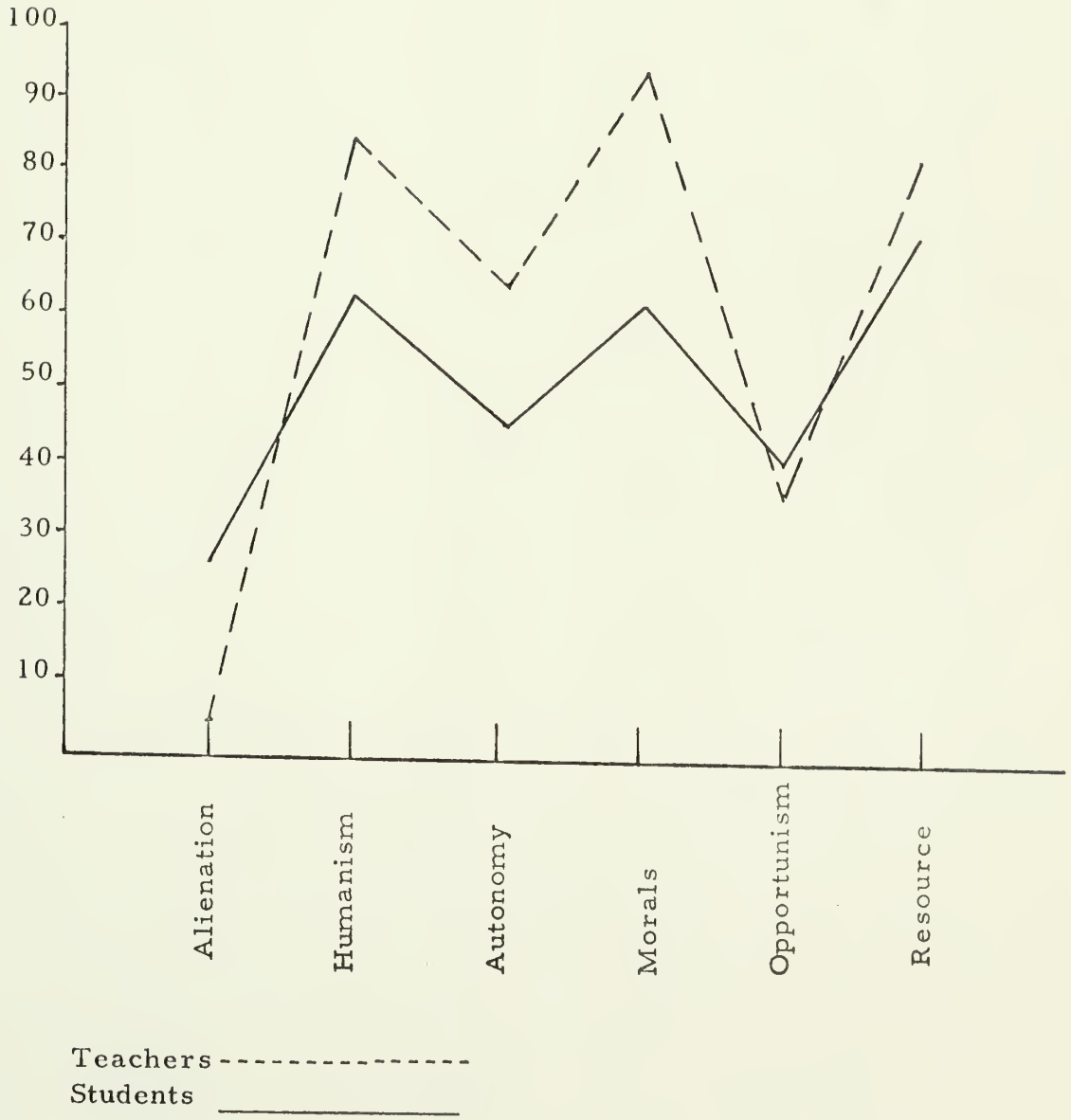


Figure 10

School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 311

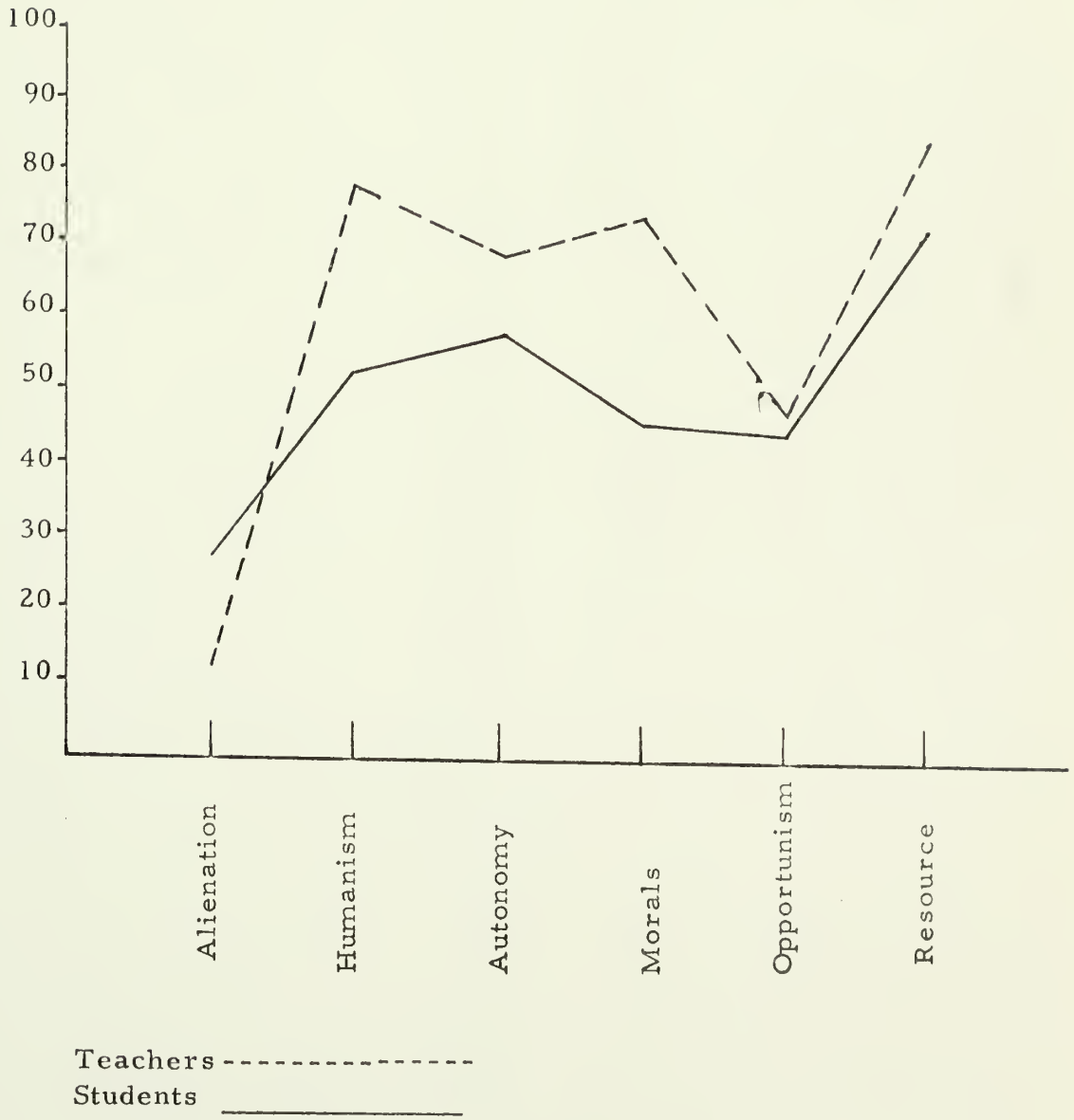


Figure 11

School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 112

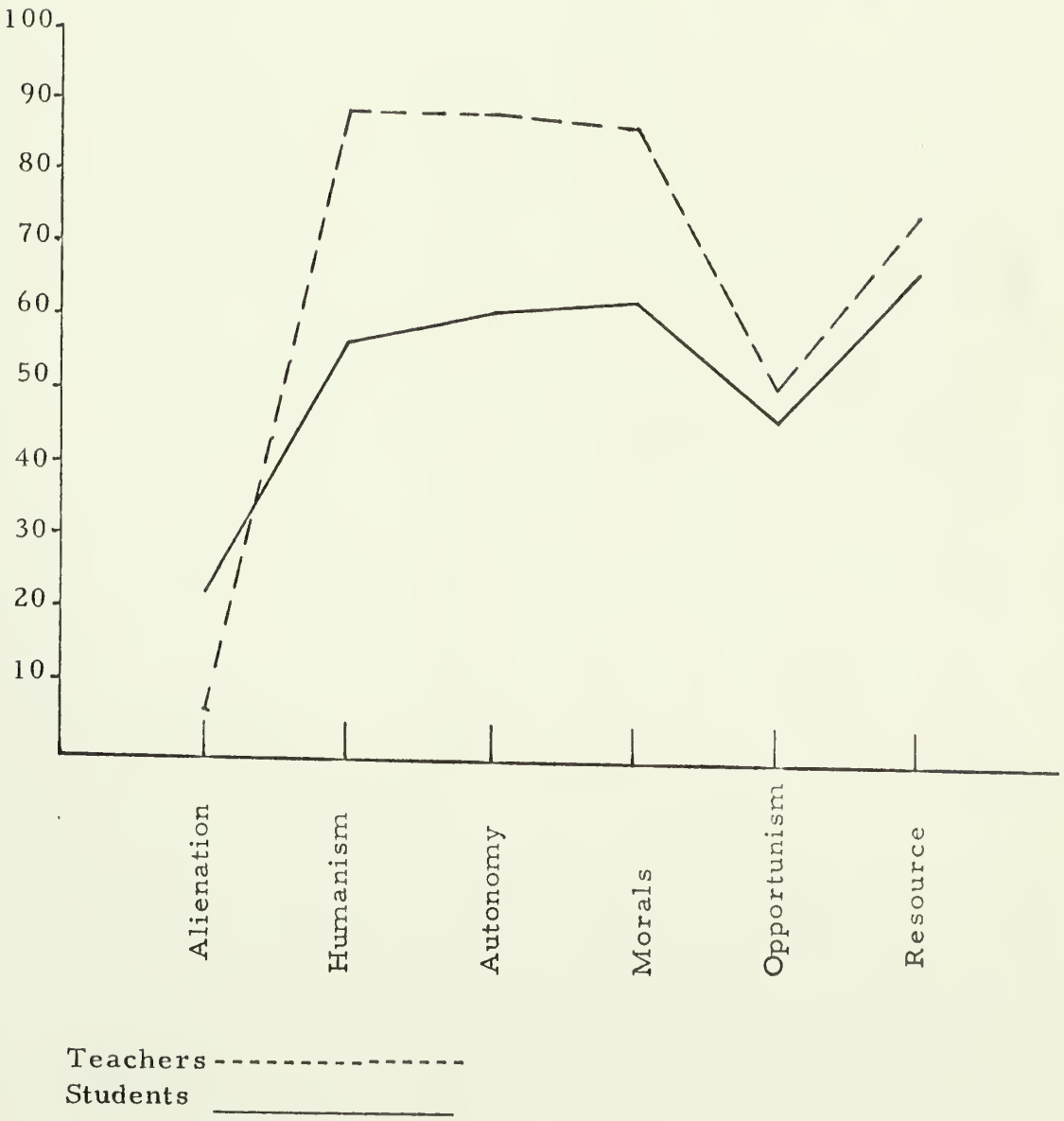
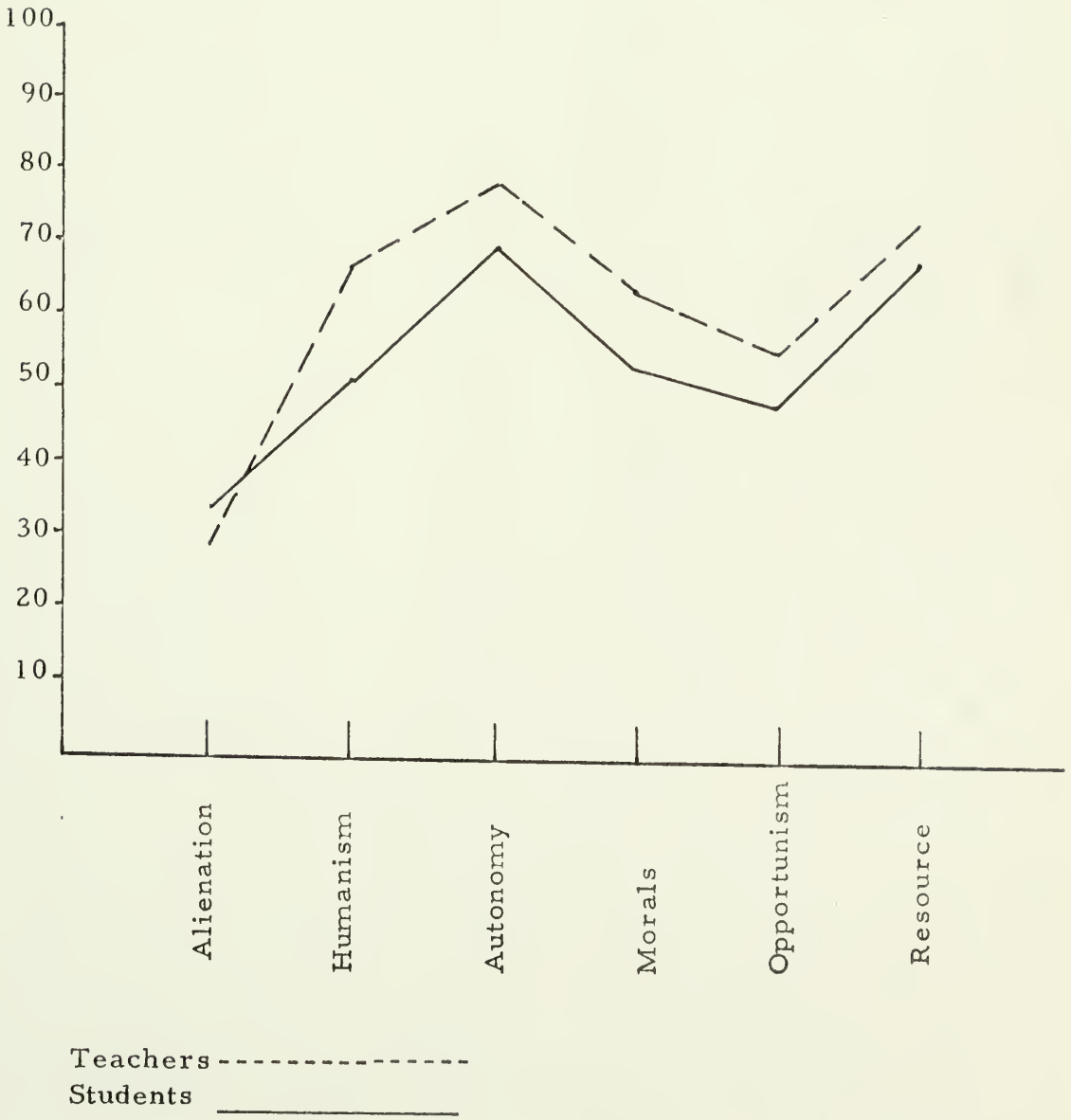


Figure 12

School Environment Pattern Across
Variables for Students & Teachers
Pattern 5
School 411



Students and teachers vary in a parallel fashion across all variables with the usual exception of Alienation.

A description of school profiles confirms the notion that patterns exist between schools for students and teachers independently and in relation to each other. A determination of school patterns seems to relate most closely to the Humanism, Autonomy and Morale scores. Generally, in schools where Autonomy is high, Humanism and Morale are lower and visa versa. A combination of these two variations between students and teachers produce four pattern clusters.

Comparison of Difference Scores and Organizational Climate Variables

The environment has been defined as the conditions, forces and external stimuli that impinge upon the growth and development of the individual. Furthermore, the educational environment has been defined by the six ESES variables. Yet, it is quickly recognized that these variables are not all of the variables that could be identified in the school environment. It is reasonable to assume that other variables contribute to the press of educational environment variables. Similarily, one might suspect that ESES difference scores between student and teacher perception of the educational environment would be affected by the organizational climate of a school.

For this reason eight organizational climate variables are compared with the ESES difference scores to analyse the relationship between the difference in student and teacher perception and selected factors of the organizational climate. The eight OCDQ subtests were used as a basis for the following hypotheses.

4. Dissengagement, Hindrance, and Aloofness will be positively correlated with ESES difference scores for each variable.

5. Esprit, Intimacy, Production emphasis, Thrust and Consideration will be negatively correlated with ESES difference scores for each variable.

A Pearson product-moment correlation was run on OCDQ variables to test these hypotheses.

Several significant relationships emerged from the analysis of difference scores and OCDQ subtests. However, each relationship was in the opposite direction from that hypothesized. Table 31 presents the results of this analysis. Disengagement reflects a climate where teachers are uninvolved in their work. The difference score for Autonomy was moderately correlated with Disengagement in the negative direction. Although they were not significant, Alienation, Humanism and Morale were slightly correlated with Disengagement in the same direction. Contrary to the stated hypothesis this suggests that schools where teachers are "not with it," students

Table 31

Correlation Between OCDQ Subtests

and Difference Scores

ESES Variables	OCDQ Subtests							
	Disengagement	Hindrance	Espirit	Intimacy	Aloofness	Production Emphasis	Thrust	Consideration
Alienation	-.19	-.08	.14	.09	.19	-.05	.30*	.34
Humanism	-.20	-.22	.42	.19	.03	-.07	.07	.20
Antonomy	-.50	-.59	.70	.51	.14	-.01	.51	.50
Morale	-.10	-.05	.29	.12	.02	-.11	.31*	.27*
Opportunism	-.01	-.31*	.01	.27*	-.22	-.15	.00	.08
Resource	-.22	.06	.51	.06	-.09	.10	.29*	.07

(Underlined coefficients are significant at $p < .01$)
(Underlined coefficients with an asterisk are significant at $p < .05$)

and teachers agree more on their perception of Autonomy. Hindrance refers to schools where teachers feel hindered from teaching because of extranious assignments. Autonomy and Opportunism were significantly and negatively correlated with Hindrance. Humanism had a slight positive correlation with Hindrance. Schools in which students and teachers agree on their perceptions of Opportunism and Autonomy, teachers feel burdened with unnecessary busy work and duties.

The highest significant correlation is between Autonomy and Esprit (.70). Humanism and Resource also had a significant positive correlation with Esprit at the .01 level. Morale was moderately correlated with Esprit. Esprit was characterized by high morale among faculty members. Where teachers and students disagree on their perception of Humanism, Autonomy and Resource, Esprit, is high. Intimacy is correlated with Autonomy (.51) beyond the .01 level and Opportunism (.27) beyond the .05 level. Intimacy reflects the social needs satisfaction of teachers. In schools where intimacy is high,difference between student and teacher perception of Autonomy and Opportunism is greater.

Correlations with Aloofness and Production emphasis yielded no significant relationships. However, Thrust and Consideration subtests correlated with several ESES variable difference scores. Thrust is characterized by principal behavior which presses for

results from not only his staff but from himself as well. Alienation, Morale and Resource difference scores had very moderate correlations with Thrust at the .05 level. Autonomy was correlated with Thrust (.51) beyond the .01 level. Consideration indicates principal behavior which is "human," or thoughtful of teachers in human terms. Difference scores for Alienation and Autonomy had a moderate, positive correlation coefficient with Consideration.

The results of this analysis did not support the stated hypotheses. In fact, as stated previously, the data supported the opposite conclusions from those hypothesized. High scores on Disengagement, Hindrance and Aloofness and low scores on Esprit Intimacy, Production emphasis, Thrust and Consideration are generally considered undesirable. In the same respect, a great discrepancy between student and teacher perception of the educational environment is assumed to be undesirable. Analysis indicated that as the organizational climate variable scores move in a desirable direction the difference scores become greater.

A clear pattern seems to exist between the organizational climate and the difference between student and teacher perception. That the pattern contradicts original expectations is initially puzzling. However, some plausible explanations suggest themselves and will appear in the next chapter.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

The purposes of this final chapter are to summarize the findings of the present study, to draw conclusions related to these findings and their impact on schooling, and to suggest potentially significant directions for future research.

Summary

The central purpose of this study was to investigate the student and teacher perceptions of the elementary school environment. Over 4,000 students and 600 teachers in thirty-six schools responded to the Elementary School Environment Survey (ESES). The ESES is a fourty-two item survey which assesses the school environment on six factors: Alienation, Humanism, Autonomy, Morale, Opportunism, and Resource. Analysis of variance procedures were used to examine student and teacher responses both within schools and across schools to determine if students and teachers differ significantly in their impression of the school environment. In addition, the numeric difference (difference scores) between student and teacher variable scores was examined to identify salient relationships between difference scores and variable scores. A final analysis procedure correlated dimensions of the organizational climate with the ESES difference scores to determine if the difference

scores for particular variables were related to a school's organizational climate. The Organizational Climate Description Questionaire (OCDQ) was used as a measure of the organizational climate. The OCDQ developed by Halpin and Crost is a sixty-four item questionaire designed to measure four factors of teacher-teacher interaction -- Disengagement, Hindrance, Esprit, Intimacy -- and four factors of teacher -principal interaction -- Aloofness, Production Emphasis, Thrust, and Consideration.

Five hypotheses were stated in Chapter I. One hypothesis was accepted and four rejected. Findings suggest that the four rejected hypotheses could be accepted if stated in the opposite direction.

The findings of the analysis of variance across school scores for each ESES variable show that students and teachers differ significantly in their perceptions of Alienation, Humanism, Autonomy, Morale and Resource beyond the .01 level. No significant difference appeared for the variable Opportunism. These findings were supported when an analysis of variance was performed between the individual scores for students and teachers within schools. The majority of schools yielded significant differences between student and teacher perceptions of Morale (32), Humanism (29), Alienation (23), and Autonomy (21). Only twelve schools, less than half the sample, revealed significant differences for Resource;

however, F ratios for several schools were close to the .05 level of significance. The apparent contradiction as a result of these two analyses for Resource might be partially explained in the different scoring procedure for within schools analysis and between schools analysis. However, since the school score used in the first analysis of variance is the theoretically established indicator of a school environment, the analysis across schools for Resource will be regarded as the indicator of significant difference. However, further research is needed to provide an adequate explanation of this contradictory phenomena.

Only four schools indicated significant differences between student and teacher perception of Opportunism, three beyond the .05 level and one beyond the .01 level, thus supporting the across schools analysis of Opportunism. The first hypothesis stated that significant differences exist between student and teacher perceptions of the educational environment. The analysis of five of the six variables supports the hypothesis, allowing us to accept it as true.

The analysis of difference scores in relation to the variable scores contradicted the second and third hypotheses. It was suggested that in schools where student and teacher perceptions for each variable were similar (low difference scores) the variable scores would be high for Humanism, Autonomy, Morale, and Resource and low for Alienation and Opportunism. Analysis of

variance of difference scores between high scoring and low scoring schools showed that for Humanism, Morale and Resource significant differences existed in the opposite direction hypothesized. In schools where Humanism, Morale and Resource are high, the difference between student and teacher perception was greatest. No significant differences were found for Alienation, Autonomy and Opportunism. Yet, for Alienation and Autonomy, the F ratio approached significance in the opposite direction hypothesized. A Pearson product-moment correlation between student variable scores and difference scores, and between teacher variable scores and difference scores showed that teachers contributed most to this phenomena. Teacher difference scores and variable scores had significant correlations with Alienation (-.72), Humanism (.76), Autonomy (.57), Morale (.71), and Resource (.65) beyond the .01 level. The same analysis procedures using student variable scores and difference scores yielded a significant relationship with Resource (.34) beyond the .05 level.

The final analysis between OCDQ subtests and ESES difference scores did not support the fourth and fifth hypothesis. In some instances significant relationships were established, but in the opposite direction of that hypothesized. The difference score for Autonomy was significantly correlated with Disengagement (-.50),

Hindrance (-.59), Esprit (.70), Intimacy (.51) Thrust (.51) and Consideration (.50) beyond the .01 level. The difference scores for other variables also yielded significant correlations beyond the .01 level; Alienation with Consideration (.34), Humanism with Esprit (.42), and Resource with Esprit (.51).

Conclusions

The findings of this study support the hypothesis that students and teachers have different perceptions of the environmental variables Alienation, Humanism, Autonomy, Morale and Resource. In each instance teachers perceived the environment in a more favorable direction than did students. Teachers scored higher on Humanism, Autonomy, Morale and Resource and lower on Alienation than students. Students and teachers agreed in their perception of Opportunism, in that significant differences emerged in only four schools.

The fact that no significant difference resulted for Opportunism leads to three possible conclusions. First, the construct of Opportunism may be weak or the items that load on it may need revision. The great dispursion of high and low item scores for both students and teachers lends support to this notion. Second, the construct of Opportunism may not be a significant factor in the Beta press of elementary schools. Third, students and teachers may in fact, view Opportunism in the same way.

A finding that was somewhat surprising is the relation of variable difference scores to variable scores. The greatest differences in perception occured when both students and teachers scored at the most favorable end of the distribution. In other words, in schools where both students and teachers felt that schools were the most human, high on morale and provide accessible material and human resources, the difference between student and teacher perception was greatest. This relationship was significant for Humanism and Resource beyond the .01 level and for Morale beyond the .05 level. In each case relationships were hypothesized in the opposite direction. To attempt an explanation or draw conclusions about this phenomena demands study and research beyond the scope of this investigation. However, the fact that it has emerged raises significant questions for both environmental theory and educational practice. For instance, are teachers in high scoring schools more optomistic, secure individuals with a superior self image, thus projecting their personal outlook onto the school environment? If so, they may effect a higher score on the part of students. Another explanation might be that it is easier to agree on negative conditions where the environment is relatively closed to alternatives, than on a positive situation where a wide range of alternatives is possible. In addition, if teachers are part of the positive school environment and actively engaged in development activities, they may be more likely to see

the school as they want it to be than as it actually is. In any event, these observations are extremely cursory and must be regarded as such.

The findings of the OCDQ analysis while initially contradictory in that they did not support the stated hypotheses were actually supportive of the findings discussed above. Subtests on which high scores are desirable had positive correlations with difference scores of the educational environment. To the contrary, subtests on which low scores are desirable had negative correlations with difference scores. Autonomy yielded the most significant relationships with OCDQ subtests: Disengagement (-.50), Hindrance (-.58), Esprit (70), Intimacy (.51), Thrust (.51) and Consideration (.50) beyond the .01 level. Alienation was correlated with Consideration (.34, p .05); Humanism with Esprit (.42, $p < .01$) and Resource with Esprit (.51, $p < .01$): Correlation coefficients between difference scores and OCDQ subtests not mentioned above were smaller and less significant. However, in most cases they tended toward the pattern described above.

Two major conclusions that can be made from this study are that students and teachers differ in their view of the educational environment and that a definite relationship exists between perception of the environment and the difference of perception between students and teachers. From these conclusions a lot of

questions are generated about the nature of perception, the school environment, and the direction of American schooling. Do students and teachers live in two different worlds? Are students or teachers more truthful in their response to survey items? Or, are they both responding in good faith? As indicated by the differing perception, is there what Murray calls "delusion" in the school? If so, what effect is this delusion on the development of youth? Further research and study is needed in order to answer these questions satisfactorily.

Implications for Future Research

Implications for future research fall into two categories. First, questions and issues raised in the conduction of this study concerning the problems of environmental measures are considered. Second, recommendations resulting from the findings of the present study are discussed.

In Chapter II, three instruments were discussed that assess elementary school environments through student perceptions: ESES, used in the present study, KESE and ECI. It seems appropriate that further work in the study of elementary school environments be directed towards refining existing measures, such as ESES, KESE and ECI, and det ermining how the instruments are related to each other. For instance, do the instruments measure the same factors? If there are differences what are they and are they

significant? Are certain instruments more appropriate for certain type schools or for differing purposes? How does reliability and validity compare among the instruments? Research directed toward examining these questions could expand our knowledge of the environment by describing a wider range of variables than are included in any single instrument.

An additional concern arose as a consequence of validity and reliability checks. The revised ESES was administered to a population of students for the first time in the present study. As a consequence, reliability and validity was established to confirm confidence in the instrument. In the process of establishing content validity five items were deleted from the instrument for analysis purposes. The items that loaded on specific variables were reduced from seven to six in three instances and to five in another. The confidence one can have in establishing reliability with fewer than seven items is greatly reduced. Thus, it seems appropriate that efforts be made to generate more items for ESES in order to increase confidence in the reliability estimates of ESES.

In Chapter III, reference was made to the scoring procedures customarily used in ESES and the scoring procedure devised for the present investigation. At present three methods have been used in a variety of studies; 66 plus 33 minus, the mean percent across item scores for each variable, and the mean score of individual student variable scores. A fruitful direction of future research

would be to examine each scoring technique to determine if they are equally viable, and if not, which has the greatest ligitimacy. As measures of the environment gain in importance and prominence, optimal precision and confidence in their instrumentation is highly desirable.

As regards the results of the present study, several directions for research seem appropriate. It should be noted that the purpose of this study was exploratory by design. Little was found outside of "common sense" judgements to provide direction in forming the hypotheses. The results of this study have revealed certain relationships and the nature of the juxtaposition of student and teacher scores for ESES. An appropriate direction for further research is to refine the present research design and replicate the study in part or the whole. The replication would employ more sophisticated statistical techniques and define with greater precision the relationships explored.

Another direction for future research would be a case study of selected schools. On sight observation of student-teacher interaction, student behavior, and teacher behavior would be employed. Data collected on the school's historical development, organizational structures, and attitude toward innovation and change would be important aspects of this investigation. Attention would also be given to instructional modes and the curriculum. In short, a case study

would provide an in depth analysis of phenomena which has been observed to a limited extent in the present study.

In order to study the effects of innovations, staff turnover, and change on the school environment and their relation to the difference between student and teacher perception of the school environment, a longitudinal study could be employed. Such a study would examine the effects of a variety of changes on the school environment over time. One purpose of such a study would be to provide continuous feedback concerning the effects of change on the environment to individual schools and to guide direction for future change.

It is hoped that the present study will stimulate further investigation into the relationship of student and teacher perception of the educational environment. An understanding of this phenomena can bring new insight to a variety of educational problems by establishing a criterion of desirable environmental conditions. As educators understand the school environment and its effect on human behavior, schools will be able to create learning opportunities and a learning environment appropriate to the needs of every student.

APPENDICES

APPENDIX A

ELEMENTARY SCHOOL ENVIRONMENT SURVEY

ELEMENTARY SCHOOL ENVIRONMENT SURVEY

INSTRUCTIONS TO STUDENTS

We are interested in your ideas about the type of school you go to. You know a lot about the school because as a student you have played on its playgrounds and studied in its classrooms. We are asking you to be a reporter and tell your thoughts about your school.

Please understand that this is not a test, and there are no right or wrong answers. In fact, we do not even ask your name. We simply want your honest ideas about your school.

The items in this questionnaire describe conditions that occur within schools. Please indicate to what extent each of these descriptions characterizes your school. Please do not judge the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

Marking the Answer Sheet

Please mark your response to each item clearly on the answer sheet. Use pencil only. Erase completely to change answers.

Biographical Information (Use items 1-6 on the answer sheet)

1-3. Fill in the school number as directed by your teacher.

4. Sex:
   - Girl: 1
   - Boy: 2

5. Grade:
   - Fifth: 1
   - Sixth: 2
   - Ungraded: 3

6. Please indicate how many years you have attended this school. Nine months at this school counts as a year.

   - Less than one year: 1
   - One or two years: 2
   - More than two years: 3

Marking Answers to Sentences

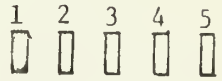
There are 42 sentences about elementary schools in this booklet. You are to mark each sentence TRUE or FALSE. When you think a sentence tells about your school mark that sentence TRUE by filling in space number 1 on the answer sheet. In other words, blacken in space number 1 if you think the sentence tells the way things usually are in your school, what happens or might happen there, or the way people usually act or feel.

Fill in space number 2 on the answer sheet if the sentence is FALSE or is not the way things usually are in your school, is not what happens or might happen there, or is not the way people usually act or feel.

The following sample shows how to mark a sentence:

Sample Sentence:

Homework in this school is very easy. 1 2 3 4 5



In this example the student marked box number 1 on the answer sheet to show that homework in this school is very easy. In other words, he thought the sentence was TRUE.

Now you are ready to mark each of the 42 sentences in the booklet. It is important to remember that the sentences are about the total school. Think about each sentence carefully and answer as honestly as you can. Take your time and mark only one space for each sentence. Make sure all sentences are marked.

Find sentence 7 on the next page and space number 7 on the answer sheet for marking this sentence. Now turn to the next page and begin.

INSTRUCTIONS TO TEACHERS

We are interested in your ideas about the type of school in which you work. You know a lot about the school because as a teacher you have directed activities on its playgrounds and in its classrooms. We are asking you to be a reporter and tell your thoughts about your school. Please understand that this is not a test. There are no right or wrong answers. We simply want your ideas about your school.

Biographical Information (Responses 1 through 6 on the answer sheet)

1-3. Fill in the school number as directed by the survey administrator.

4.	Sex:	Male:	1
		Female:	2
5.	Age:	20-29:	1
		30-39:	2
		40-49:	3
		50-59:	4
		60 or over:	5
6.	Years at this school:	less than 1:	1
		1-2:	2
		3-4:	3
		5-10:	4
		10 or more:	5

Marking Answers to Survey Items

The items in this survey describe conditions that occur within elementary schools. Please indicate whether or not each of these items characterizes your school. Do not judge the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

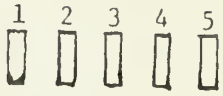
There are 42 sentences about elementary schools in this booklet. You are to mark each sentence TRUE or FALSE.

When you think the sentence tells the way things usually are in your school, what happens or might happen there, or the way people usually act or feel, mark that sentence TRUE by filling in space number 1 on the answer sheet.

Fill in space number 2 on the answer sheet if you think the sentence is FALSE or is not the way things usually are in your school, is not what happens or might happen there, or is not the way people usually act or feel.

The following sample shows how to mark a sentence:

Sample sentence:

Homework in this school is very easy. 

In this example the person marked the answer TRUE, space number 1, to show that homework in this school is very easy.

<u>It is important to remember that the sentences are about the total school</u>. Think about each sentence carefully and answer as honestly as you can. Take your time and mark only one space for each sentence. Make sure all sentences are marked.

Find sentence 7 on the next page and the space number 7 on the answer sheet for marking this sentence. Now turn to the next page and begin.

7. Students here are very quick to tell teachers about things that should be changed.

8. Students almost always wait to be called on before speaking in class.

9. Students do not pay much attention to school rules and regulations.

10. Students often tell teachers what they would like to study.

11. Students may take books from the library shelves without the help of the librarian or teacher.

12. Students do not get any special favors in this school.

13. Many students like to stay around after school gets out.

14. Many of the teachers go out of their way to help students.

15. Most of the teachers in this school are unfriendly.

16. Most students are not interested in such things as poetry, music, or painting.

17. Students often work in small groups of about three or four students without the teachers.

18. One way to get good grades in this school is to be nice to the teachers.

19. Students know who the most important people in this school are.

20. Students often interrupt while someone else is talking.

21. This school teaches students to be polite.

22. Many students help each other with their classwork.

23. Most students here care much about their school work.

24. Students have many chances to help other students.

25. Teachers seldom take their classes to the library so that students can look up information.

26. This school has very few exhibits and pictures for students to look at.

27. Many students say that they do not like the rules made by the teachers.

28. Students know when they can get away with doing something wrong.

29. Many students do not behave while they are on the playground.

30. Students here do not work on projects by themselves.

31. Most teachers do not talk to students about concerts, plays and museums.

32. Many students get into trouble with the teachers.

33. Many teachers are too busy to talk to students about their problems or to give them extra help.

34. It is difficult for students to get the teacher to like them.

35. Students sometimes make plans to do something bad to the school.

36. Students often take field trips to interesting places.

37. The teachers usually check to make sure that students finish their schoolwork.

38. Most students here do not like to get into any kind of argument.

39. This school seems to be an unfriendly place.

40. In this school students have many chances to listen to music.

41. Many of the students here are unhappy about the school.

42. The students in this school feel like they are one big family.

43. Sometimes students watch lessons on television.

44. When students do something wrong, they usually get caught.

45. Teachers watch the students closely when they work to make sure there are no mistakes.

46. Most of the teachers care about problems that students are having.

47. If students are unhappy in school, the teacher will call their parents.

48. Students that the principal and teachers know will have it easier in this school.

APPENDIX B

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

The items in this questionnaire describe typical behaviors or conditions that occur within school organizations. Please indicate to what extent each of these descriptions characterizes your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they must work. After you have answered the questionnaire the behaviors or conditions that have been described as typical by the majority of the teachers in your school will be examined, and from this description a portrait of the teacher-principal interaction will be constructed.

Marking Instructions

Printed below is an example of a typical item found in the Organizational Climate Description Questionnaire:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

1. Teachers call each other by their first names. 1 2 3 4 5

In this example the respondent marked alternative 3 on the answer sheet to show that the inter-personal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly on the answer sheet, as in the example. Sections I and II of the answer sheet will be used. PLEASE BE SURE THAT YOU MARK EVERY ITEM.

Biographical Information

Please use numbers 1-12 on the answer sheet for the following information.

1. (example)

2. -4. Leave blank

5. -7. School number (Write in the number that is indicated by your proctor.)

8. Position:
   - Teacher 1____
   - Principal 2____
   - Other 3____

9. Sex:
   - Man 1____
   - Woman 2____

10. Age:
   - 20-29 1____
   - 30-39 2____
   - 40-49 3____
   - 50-59 4____
   - 60 or over 5____

11. Years of experience in education:
   - 0-3 1____
   - 4-9 2____

   10-19
   - 10-19 3____
   - 20-29 4____
   - 30 or over 5____

12. Years at this school:
   - 0-4 1____
   - 5-9 2____
   - 10-19 3____
   - 20 or over 4____

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

13. Teachers' closest friends are other faculty members at this school. 1 2 3 4

14. The mannerisms of teachers at this school are annoying. 1 2 3 4

15. Teachers spend time after school with students who have individual problems. 1 2 3 4

16. Instructions for the operation of teaching aids are available. 1 2 3 4

17. Teachers invite other faculty of visit them at home. 1 2 3 4

18. There is a minority group of teachers who always oppose the majority. 1 2 3 4

19. Extra books are available for classroom use. 1 2 3 4

20. Sufficient time is given to prepare administrative reports. 1 2 3 4

21. Teachers know the family background of other faculty members. 1 2 3 4

22. Teachers exert group pressure on non-conforming faculty members. 1 2 3 4

23. In faculty meetings, there is a feeling of "let's get things done." 1 2 3 4

24. Administrative paper work is burdensome at this school. 1 2 3 4

25. Teachers talk about their personal life to other faculty members. 1 2 3 4

26. Teachers seek special favors from the principal. 1 2 3 4

27. School supplies are readily available for use in classwork. 1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

28.	Student progress reports require too much work.	1 2 3 4
29.	Teachers have fun socializing together during school time.	1 2 3 4
30.	Teachers interrupt other faculty members who are talking in staff meetings.	1 2 3 4
31.	Most of the teachers here accept the faults of their colleagues.	1 2 3 4
32.	Teachers have too many committe requirements.	1 2 3 4
33.	There is considerable laughter when teachers gather informally.	1 2 3 4
34.	Teachers ask nonsensical questions in faculty meetings.	1 2 3 4
35.	Custodial service is available when needed.	1 2 3 4
36.	Routine duties interfere with the job of teaching.	1 2 3 4
37.	Teachers prepare administrative reports by themselves.	1 2 3 4
38.	Teachers ramble when they talk in faculty meetings.	1 2 3 4
39.	Teachers at this school show much school spirit.	1 2 3 4
40.	The principal goes out of his way to help teachers.	1 2 3 4
41.	The principal helps teachers solve personal problems.	1 2 3 4
42.	Teachers at this school stay by themselves.	1 2 3 4
43.	The teachers accomplish their work with great vim, vigor, and pleasure.	1 2 3 4
44.	The principal sets an example by working hard himself.	1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

45.	The principal does personal favors for teachers.	1 2 3 4
46.	Teachers eat lunch by themselves in their own classrooms.	1 2 3 4
47.	The morale of the teachers is high.	1 2 3 4
48.	The principal uses constructive criticism.	1 2 3 4
49.	The principal stays after school to help teachers finish their work.	1 2 3 4
50.	Teachers socialize together in small select groups.	1 2 3 4
51.	The principal makes all class-scheduling decisions.	1 2 3 4
52.	Teachers are contacted by the principal each day.	1 2 3 4
53.	The principal is well prepared when he speaks at school functions.	1 2 3 4
54.	The principal helps staff members settle minor differences.	1 2 3 4
55.	The principal schedules the work for the teachers.	1 2 3 4
56.	Teachers leave the grounds during the school day.	1 2 3 4
57.	The principal criticizes a specific act rather than a staff member.	1 2 3 4
58.	Teachers help select which cources will be taught.	1 2 3 4
59.	The prinicpal corrects teachers' mistakes.	1 2 3 4
60.	The principal talks a great deal.	1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

61.	The principal explains his reasons for criticism to teachers.	1 2 3 4
62.	The principal tries to get better salaries for teachers.	1 2 3 4
63.	Extra duty for teacher is post conspicuously.	1 2 3 4
64.	The rules set by the principal are never questioned.	1 2 3 4
65.	The principal looks out for the personal welfare of teachers.	1 2 3 4
66.	School secretarial service is available for teachers' use.	1 2 3 4
67.	The principal runs the faculty meeting like a business conference.	1 2 3 4
68.	The principal is in the building before teachers arrive.	1 2 3 4
69.	Teachers work together preparing administrative reports.	1 2 3 4
70.	Faculty meetins are organized according to a tight agenda.	1 2 3 4
71.	Faculty meetings are mainly principal-report meetings.	1 2 3 4
72.	The principal tells teachers of new ideas he has run across.	1 2 3 4
73.	Teachers talk about leaving the school system.	1 2 3 4
74.	The principal checks the subject-matter ability of teachers.	1 2 3 4
75.	The principal is easy to understand.	1 2 3 4
76.	Teachers are informed of the results of a supervisor's visit.	1 2 3 4
77.	Grading practices are standardized at this school.	1 2 3 4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Frequently occurs

78. The principal insures that teachers work to their full capacity. 1 2 3 4

79. Teachers leave the building as soon as possible at day's end. 1 2 3 4

80. The principal clarifies wrong ideas a teacher may have. 1 2 3 4

APPENDIX C

FACE SHEET FOR SCHOOL PRINCIPAL

School Environment Study
Information Sheet
(to be completed by the school principal)

SCHOOL NAME_____DATE_____

SCHOOL NUMBER_____

Information about the school:

Type of organization (circle): K-6, K-5, 1-6, 1-5, other_____

How many students are enrolled in this school? _____

What is the approximate per-pupil expenditure for elementary education in this district?

How would you characterize the socioeconomic class of the parent population of this school? (circle)
populati

lower class middle class upper class

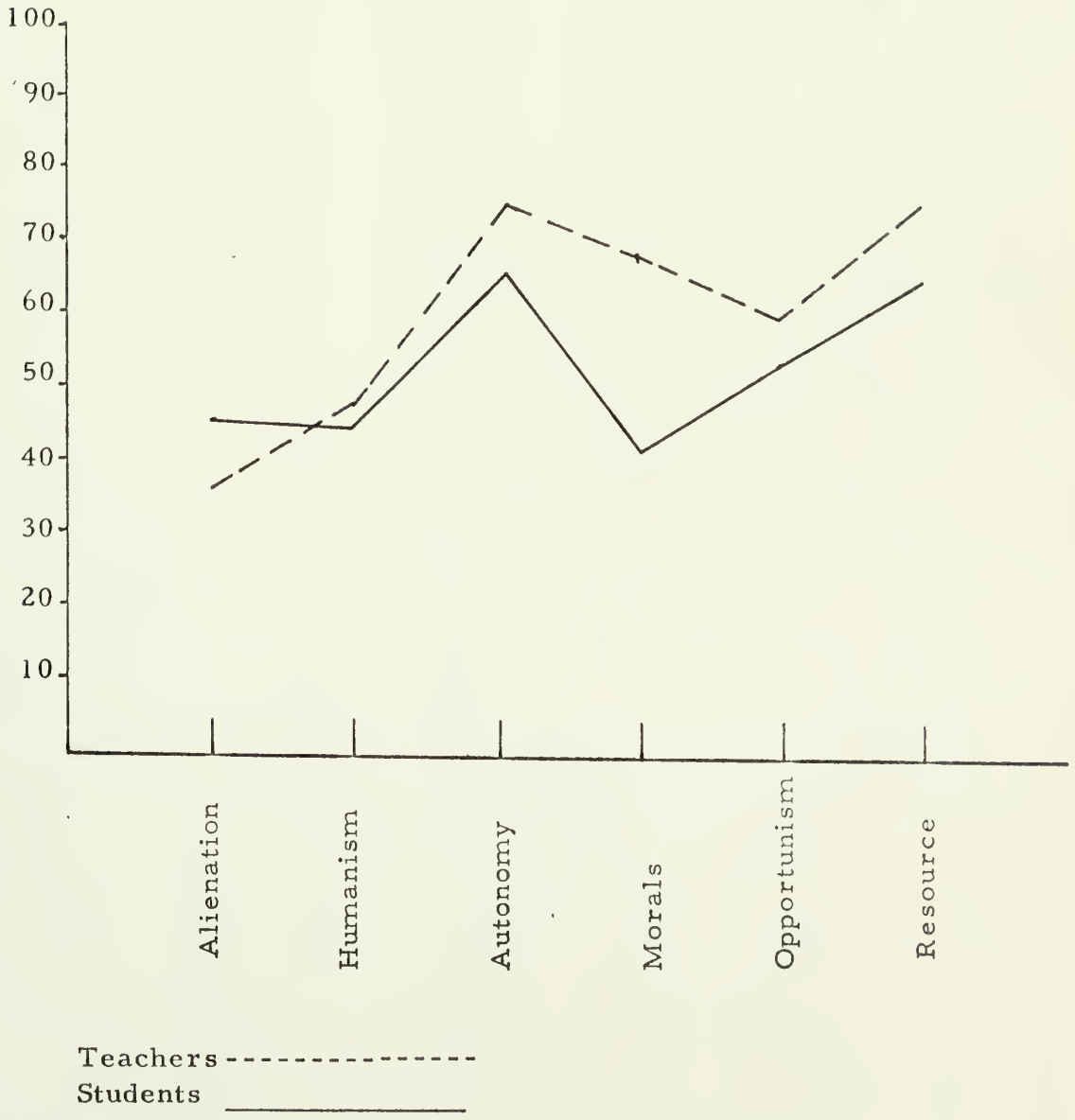
lower middle class upper middle class

Are there any additional features of the student body that make it particularly unique?

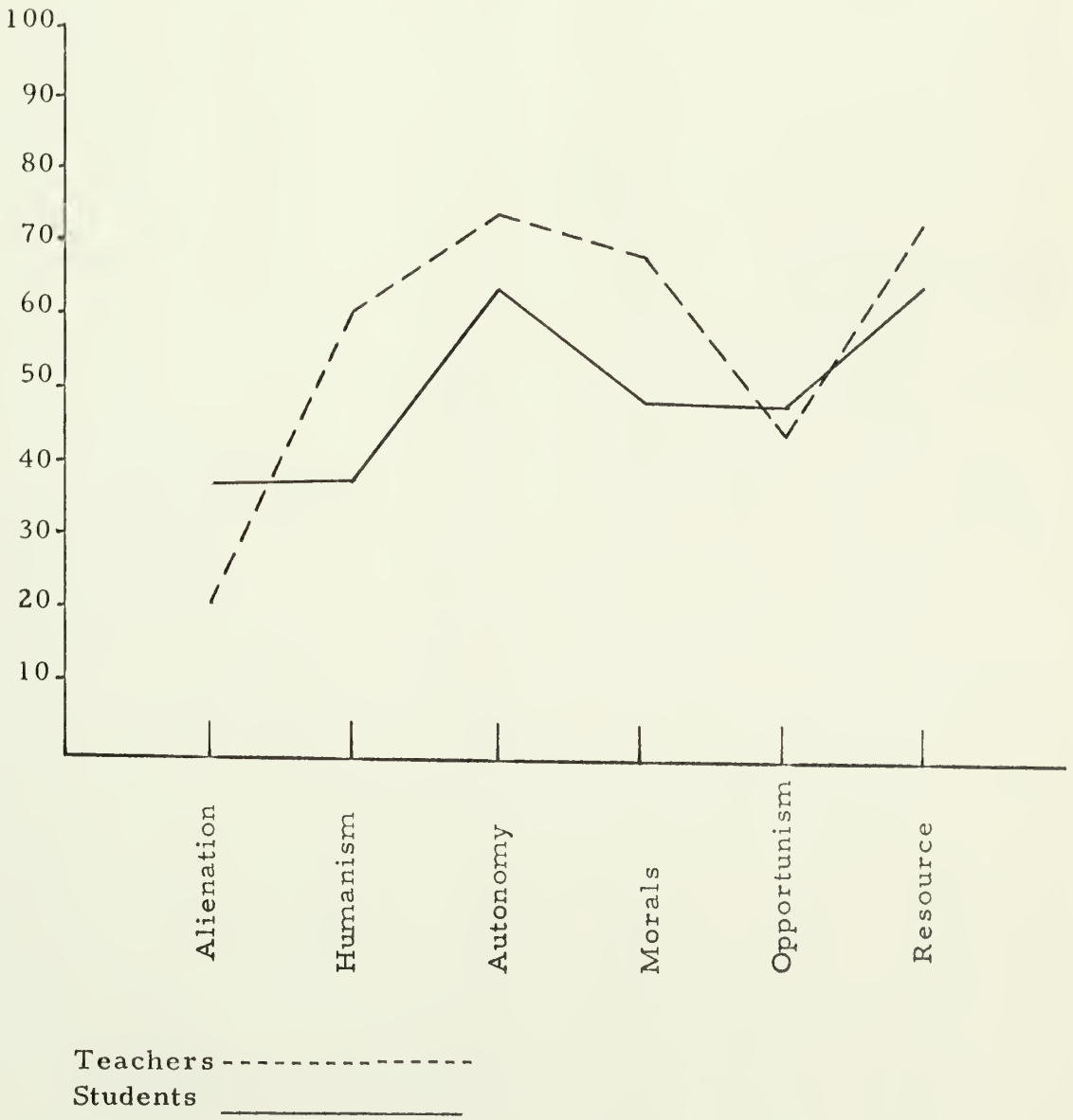
APPENDIX D

SCHOOL ENVIRONMENT PATTERNS ACROSS VARIABLES FOR STUDENTS AND TEACHERS

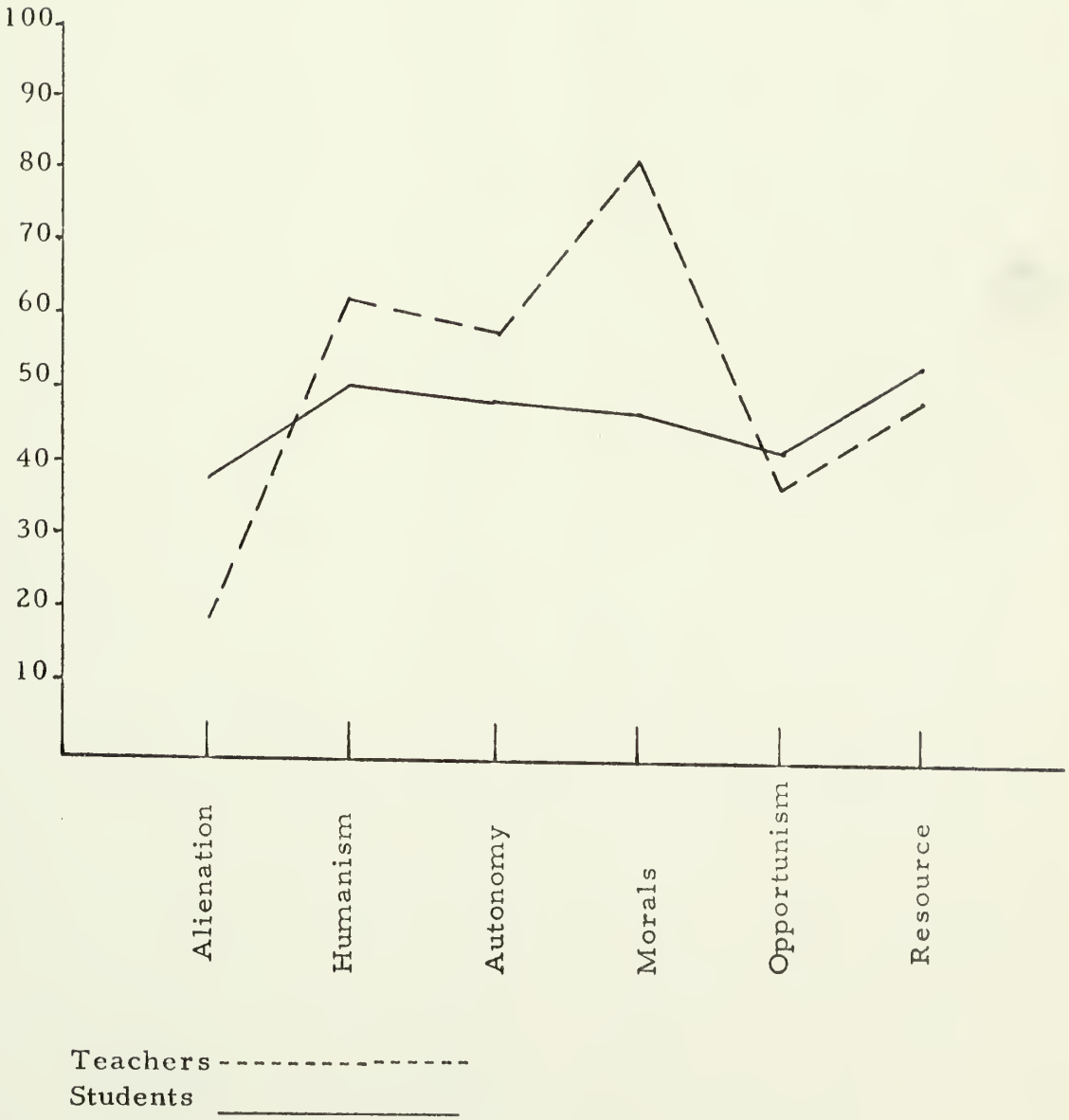
School Environment Pattern Across
Variables for Students & Teachers
Pattern 1
School 101



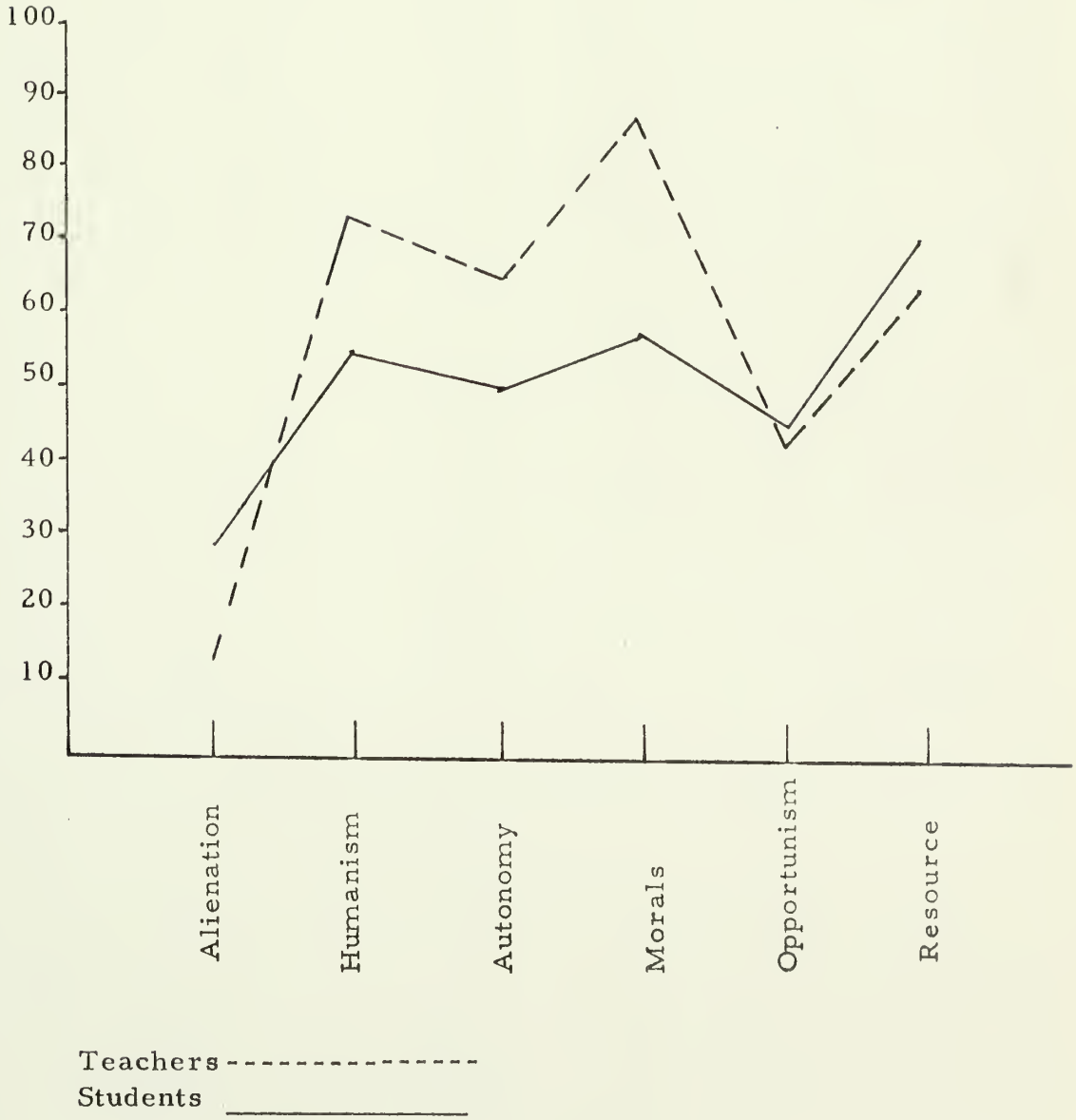
School Environment Pattern Across
Variables for Students & Teachers
Pattern 1
School 422



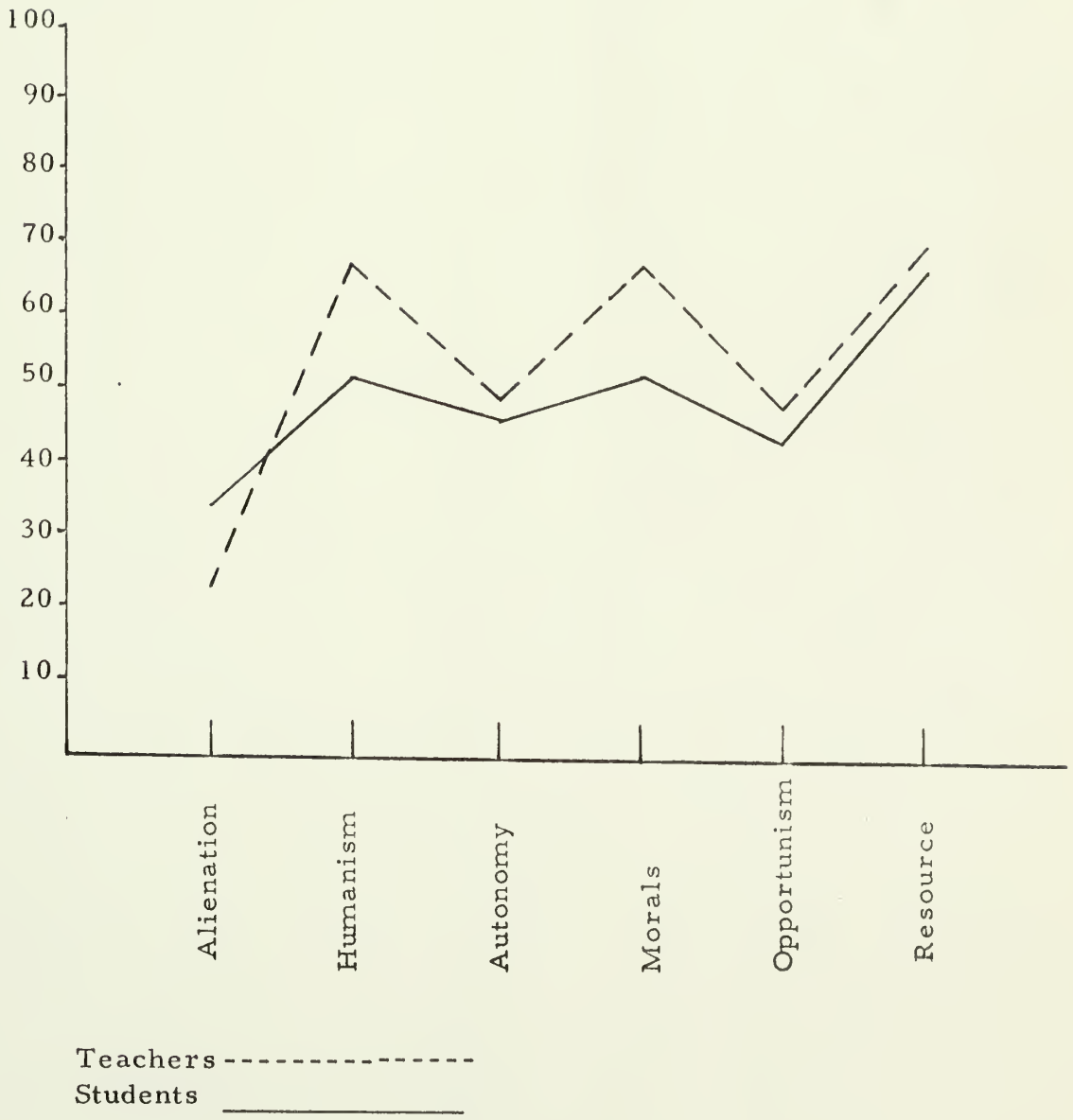
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 400



School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 001



School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 333



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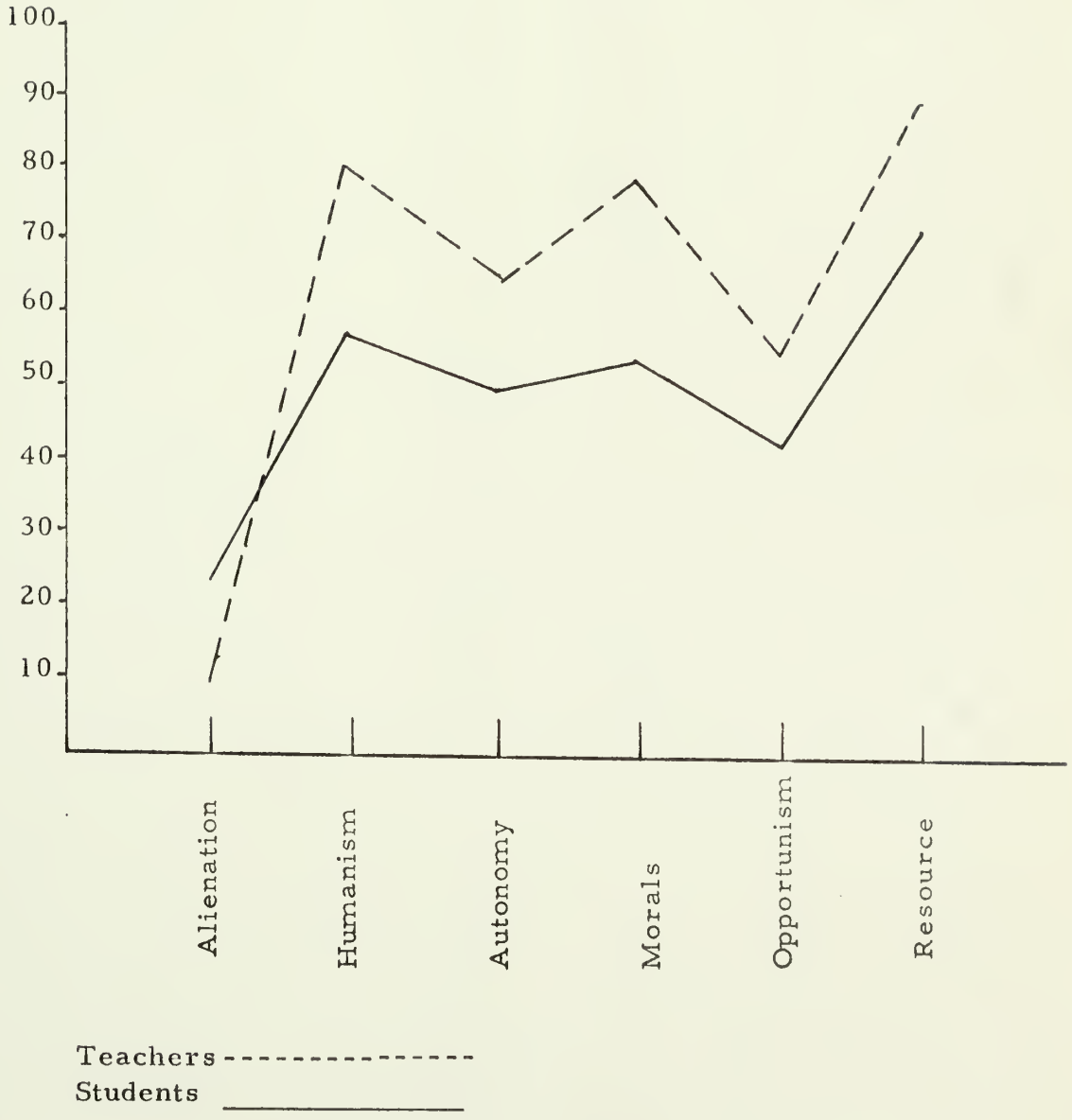
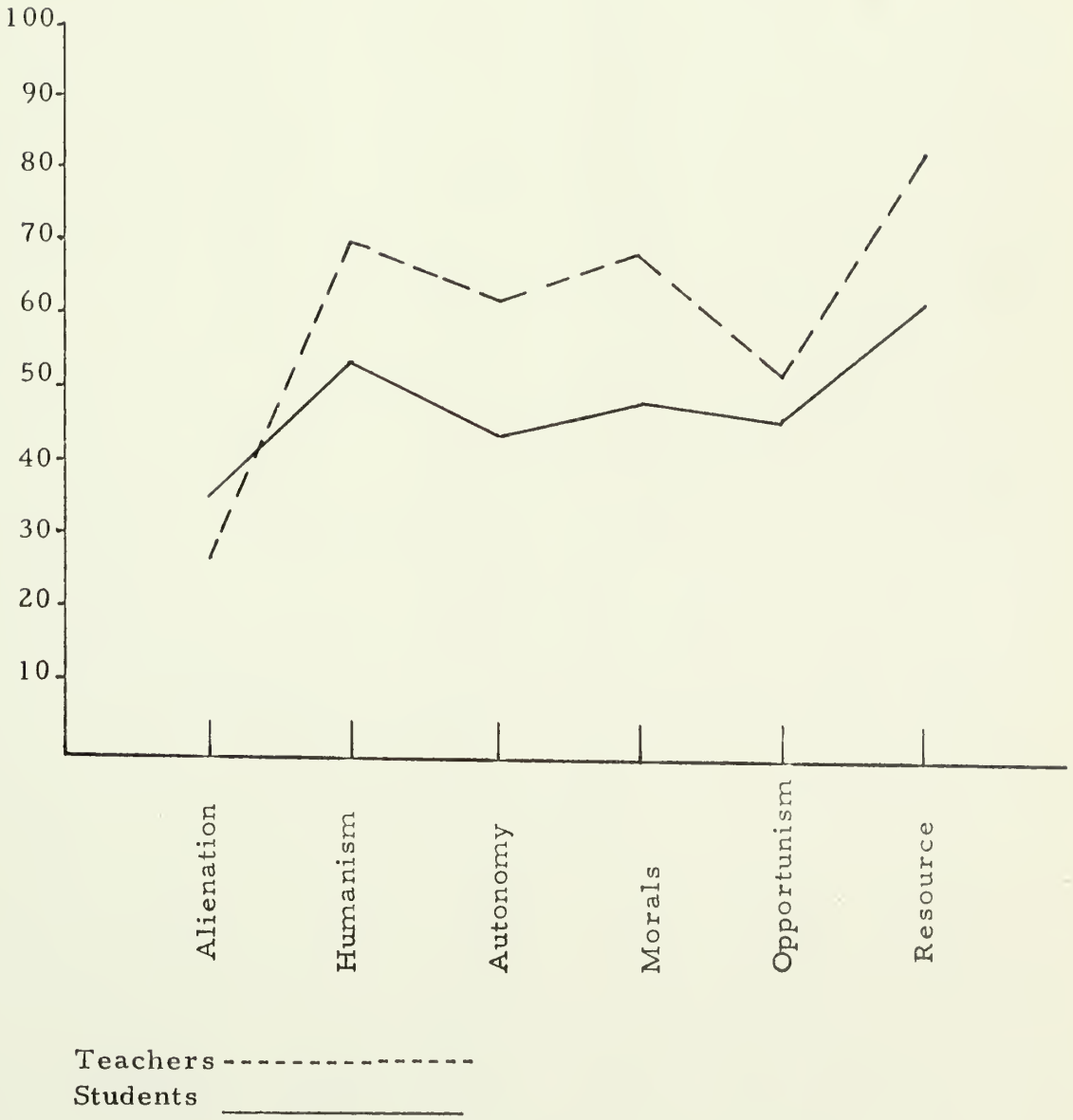
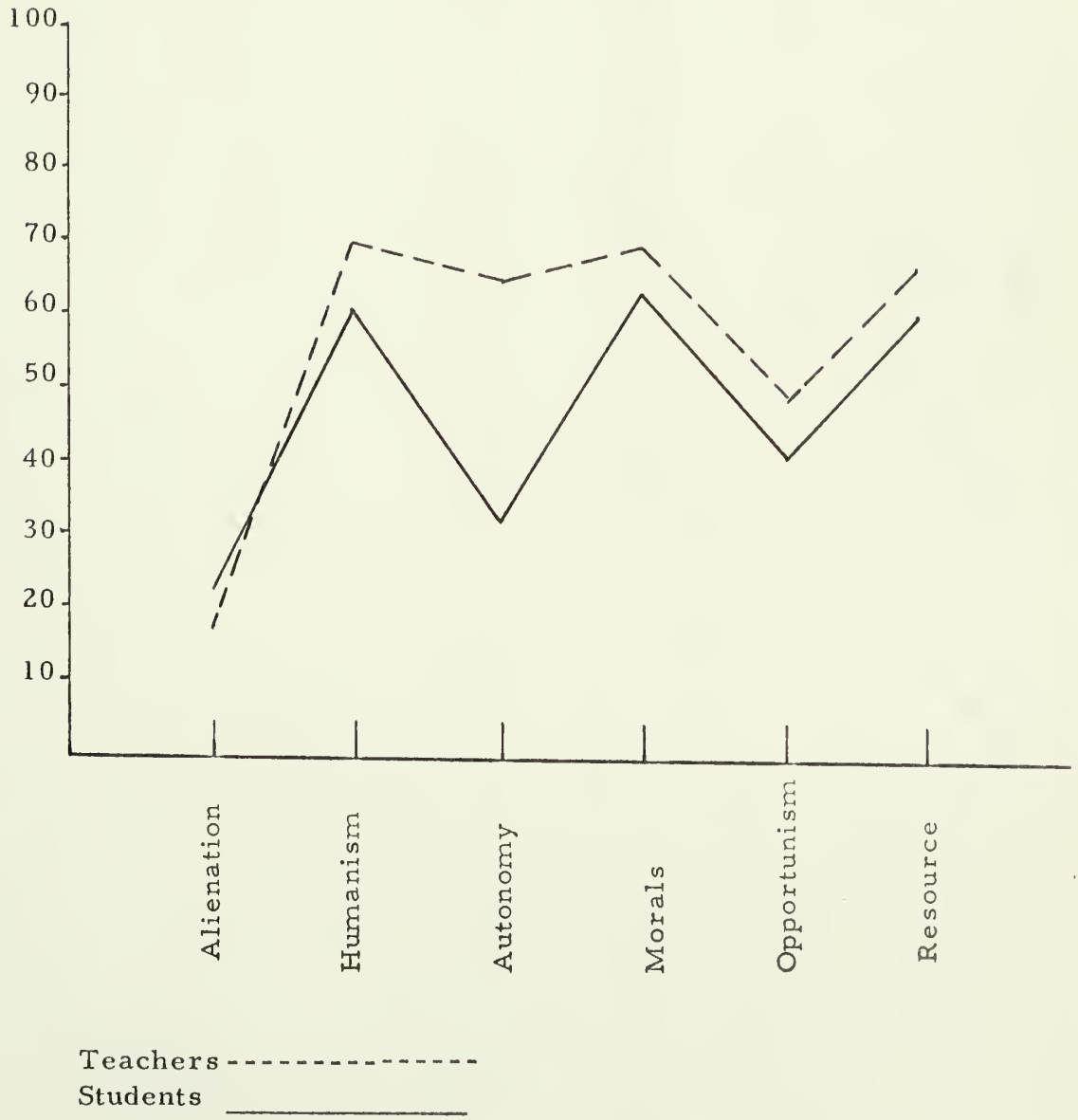
Variables for Students & Teachers
Pattern 2
School 342



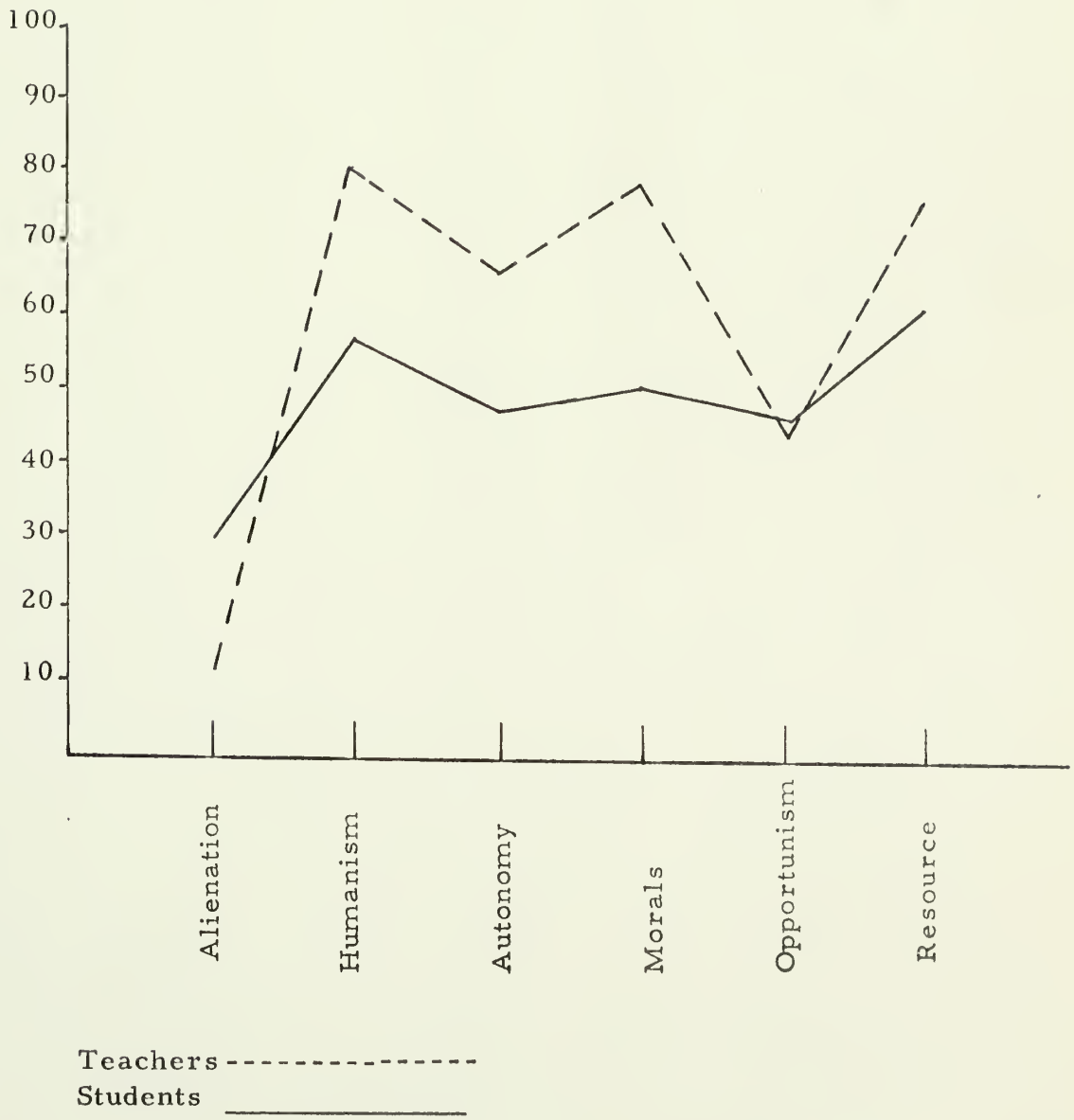
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 103



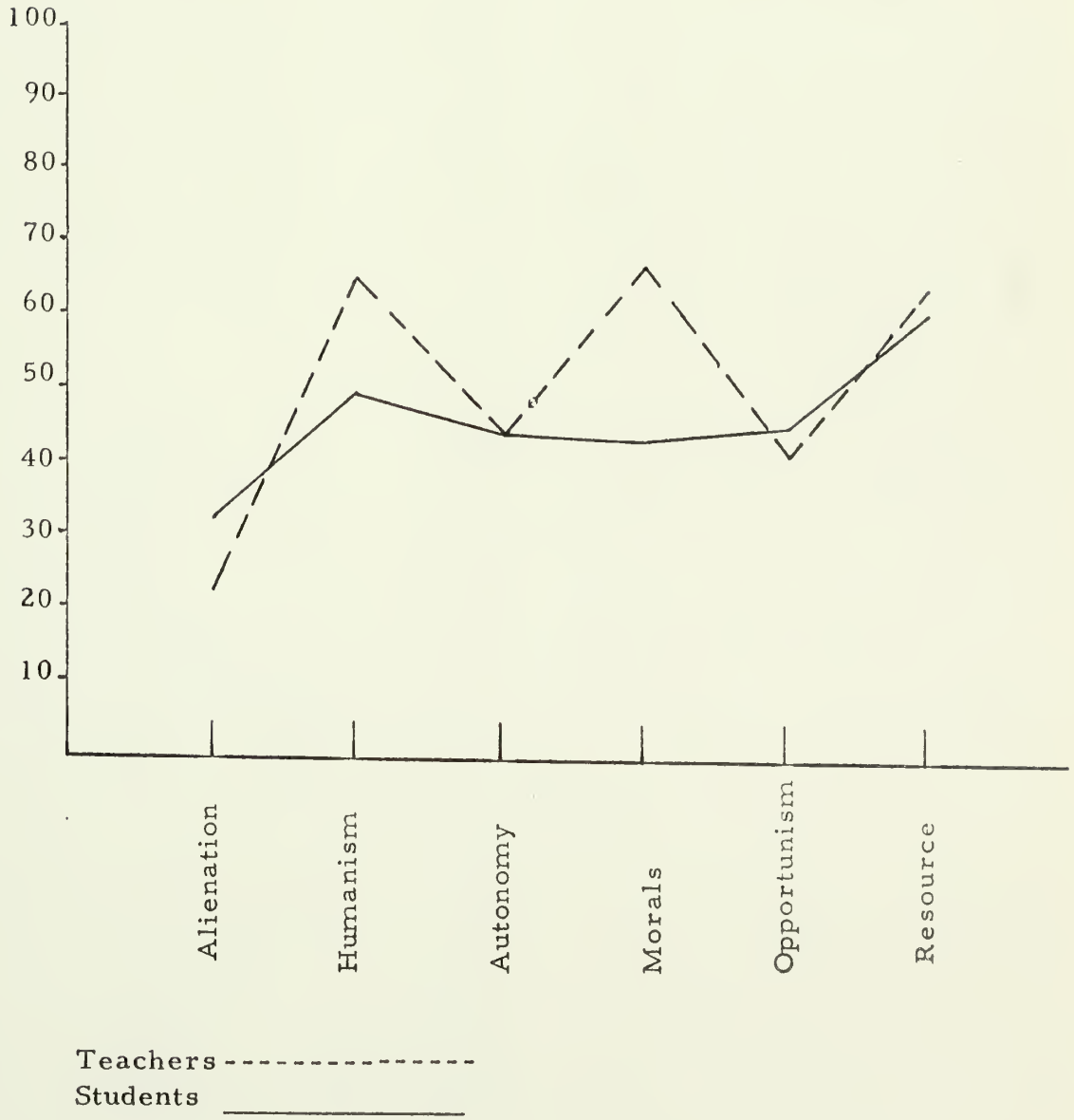
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 213



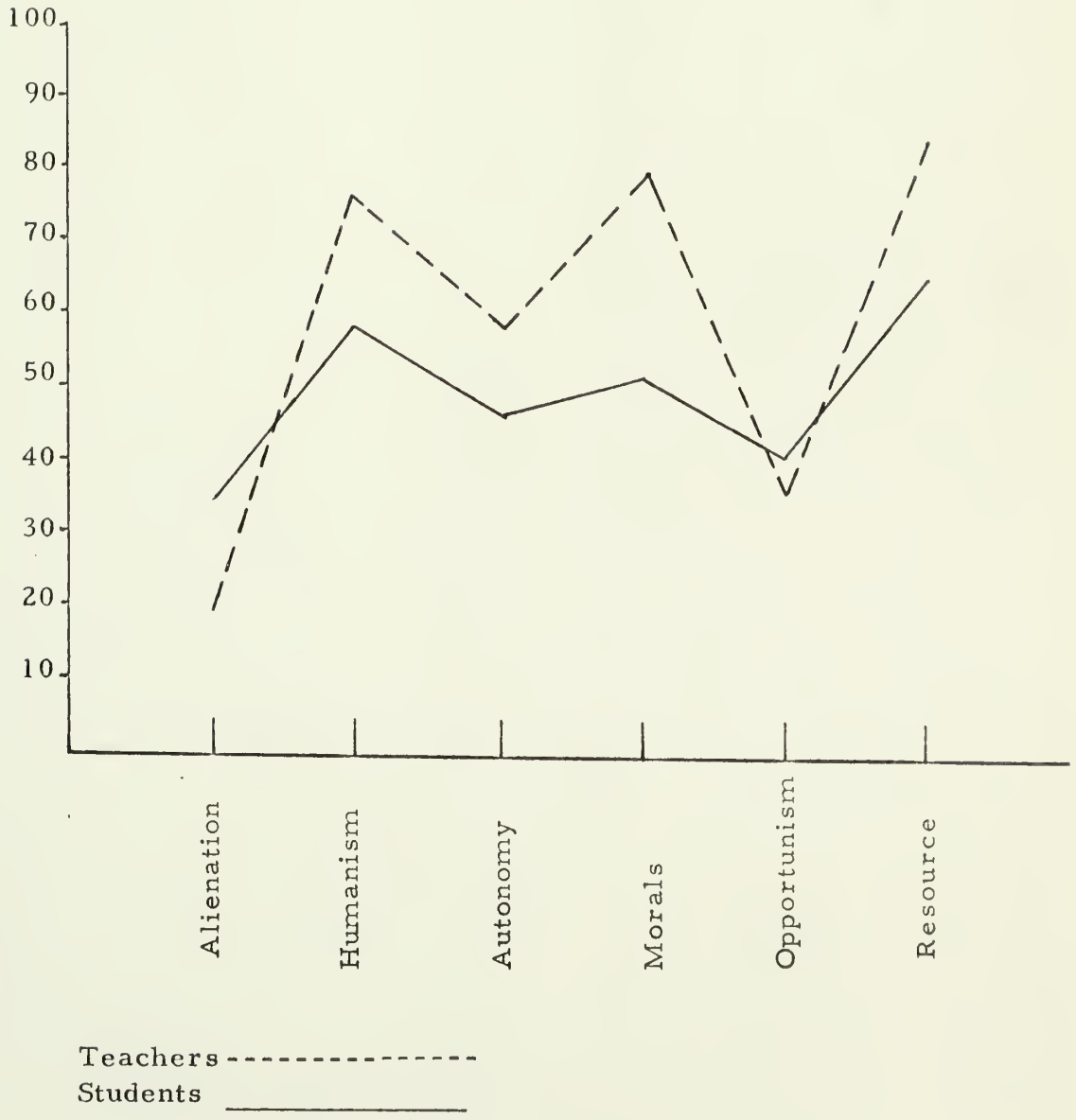
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 301



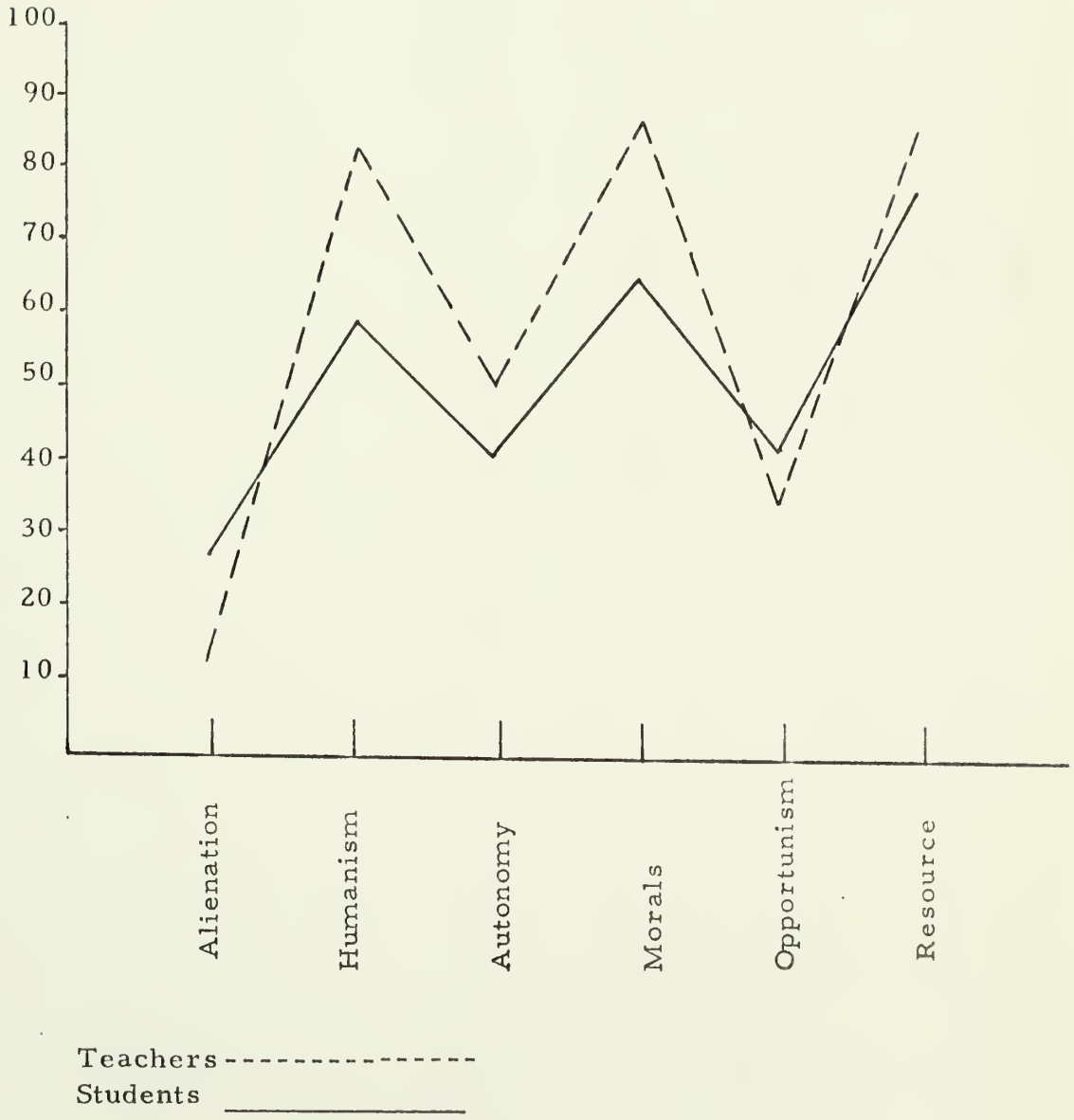
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 121



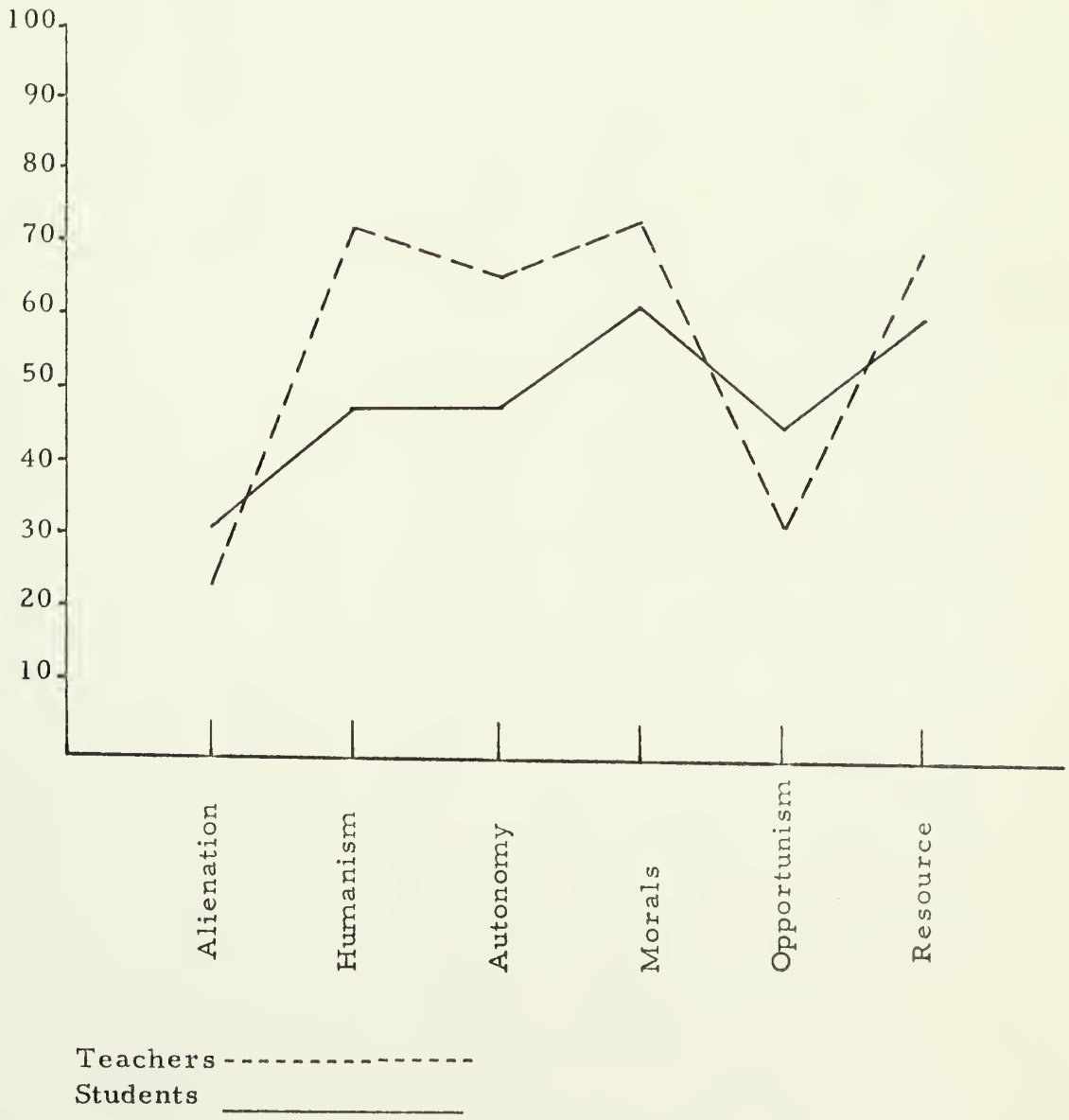
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 003



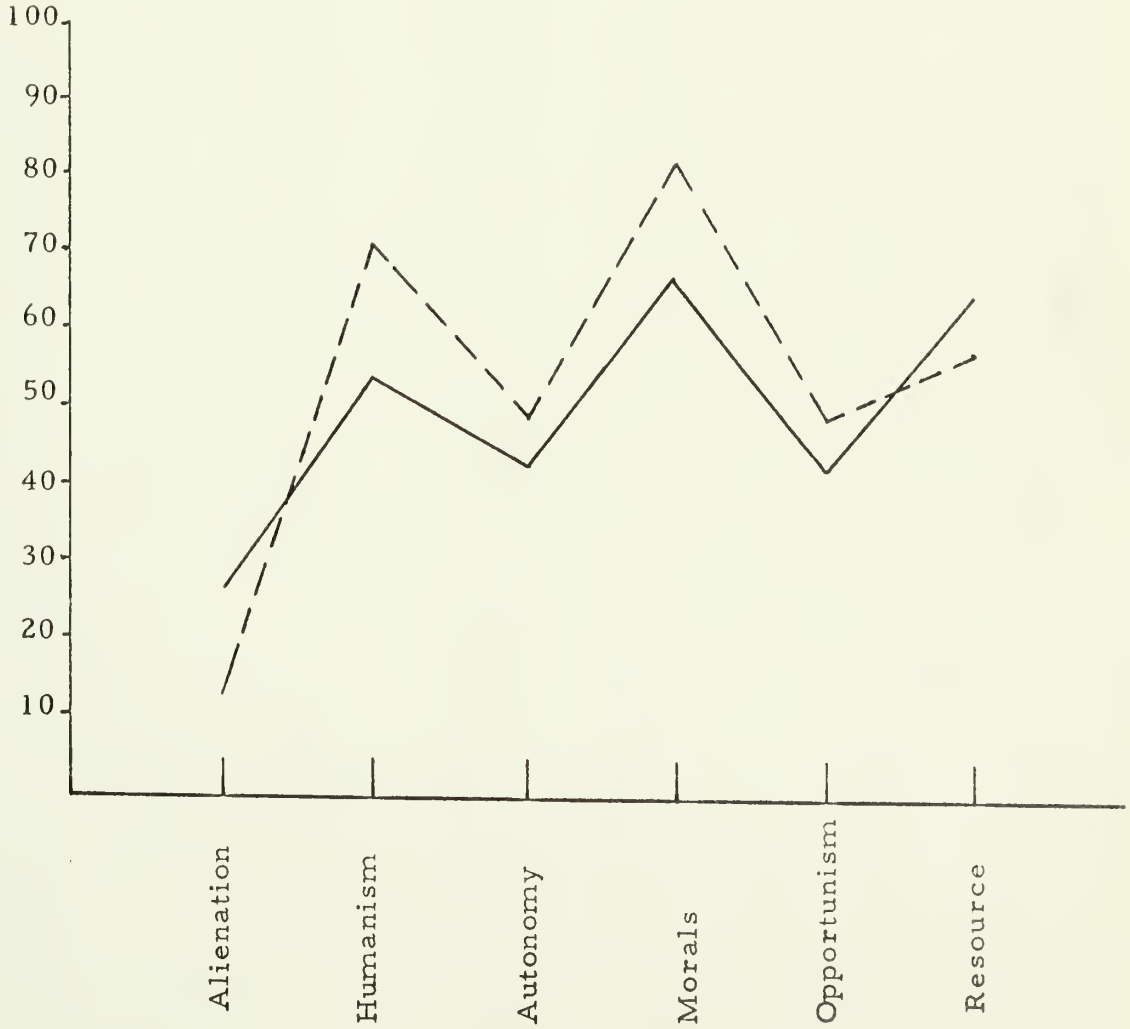
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 330



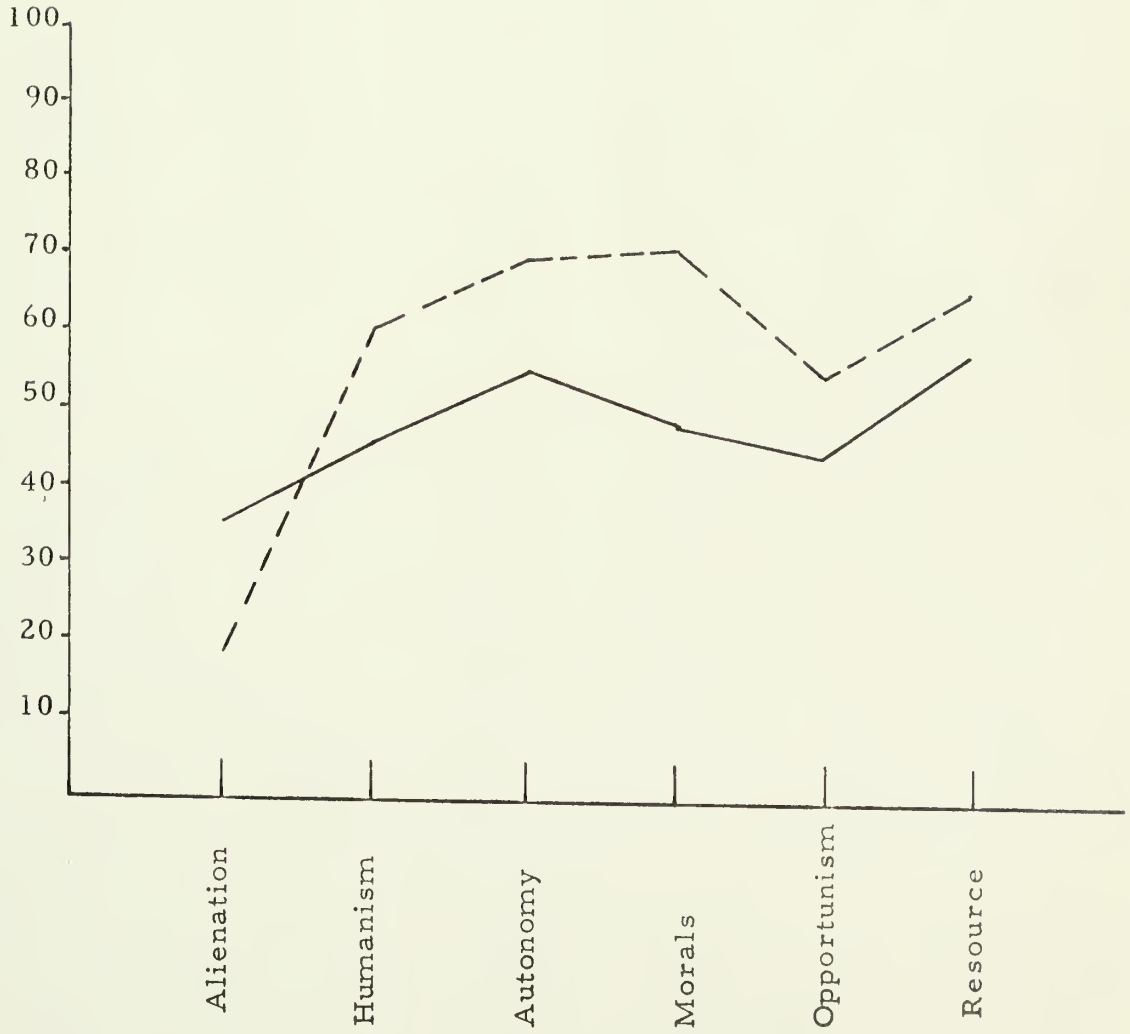
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 410



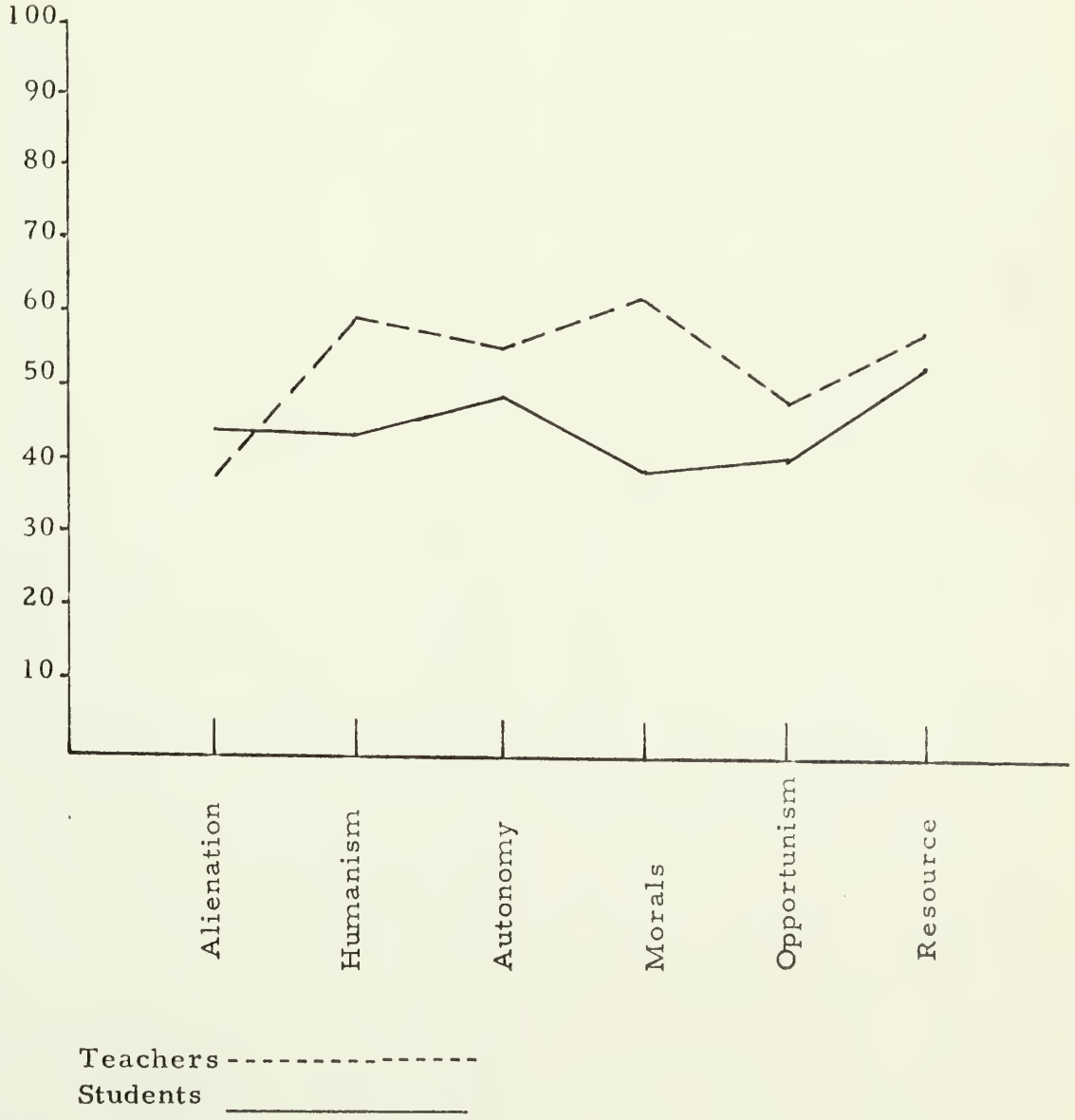
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 212



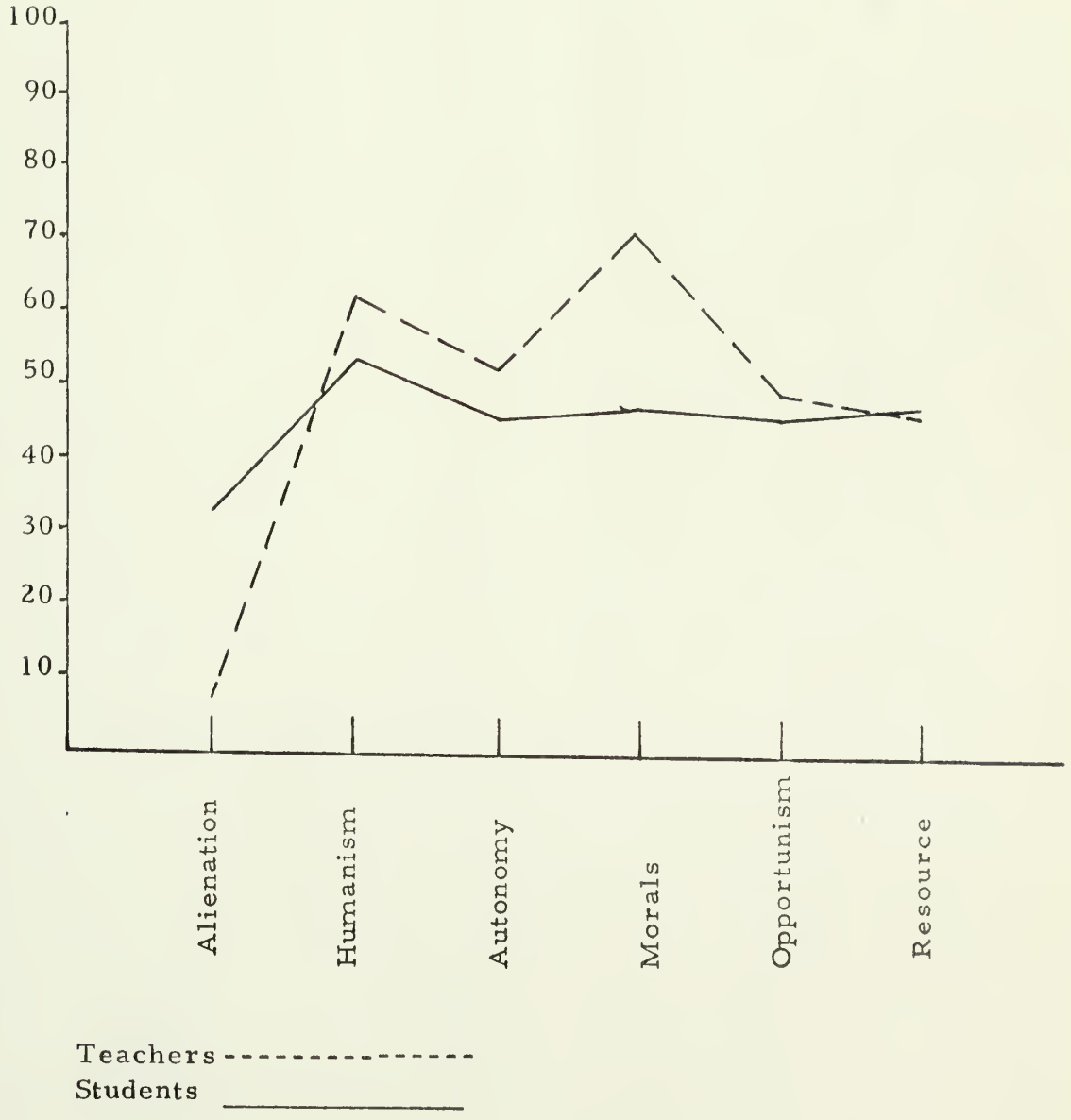
School Environment Pattern Across
Variables for Students & Teachers
Pattern 2
School 203



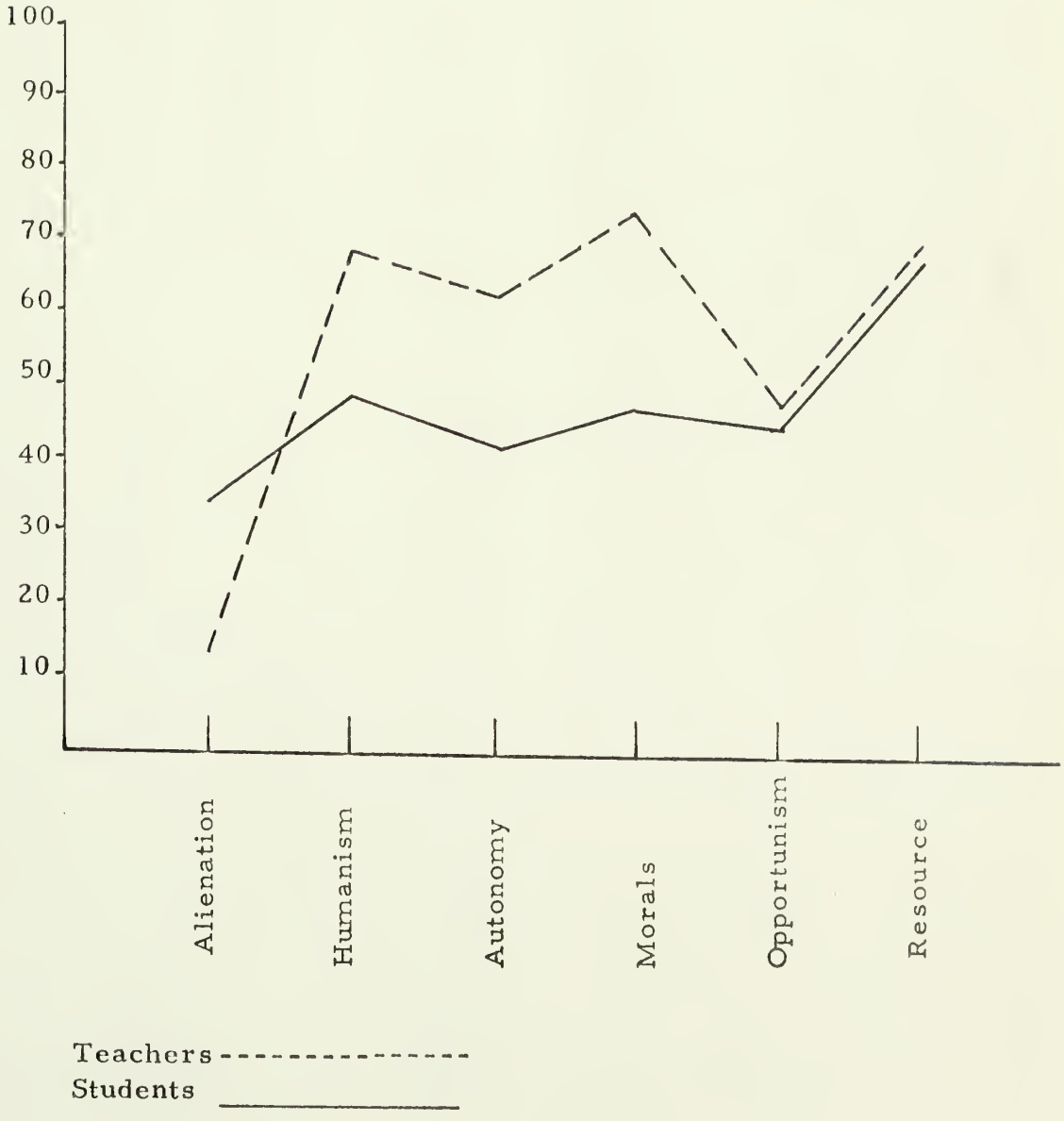
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 202



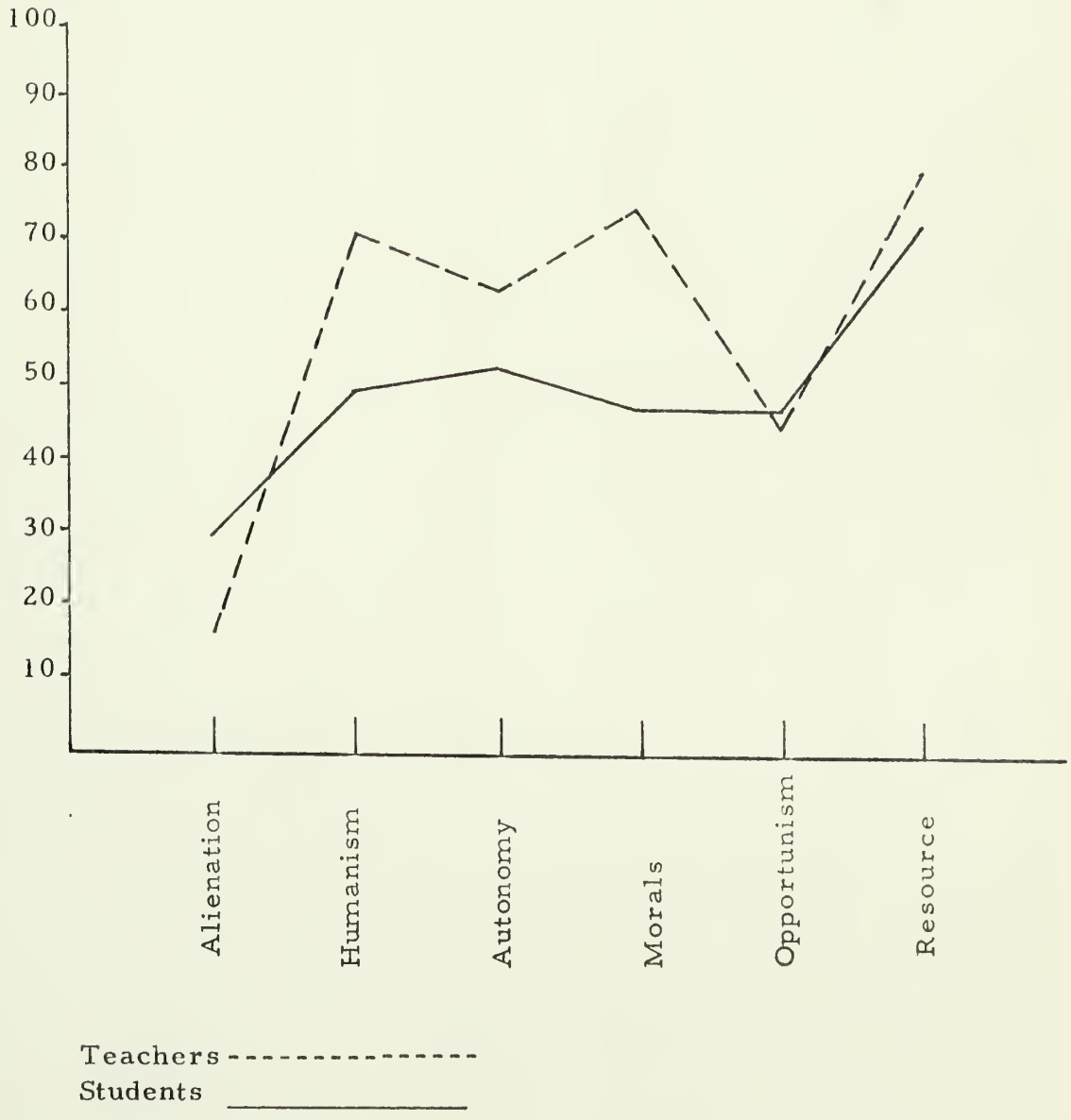
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 200



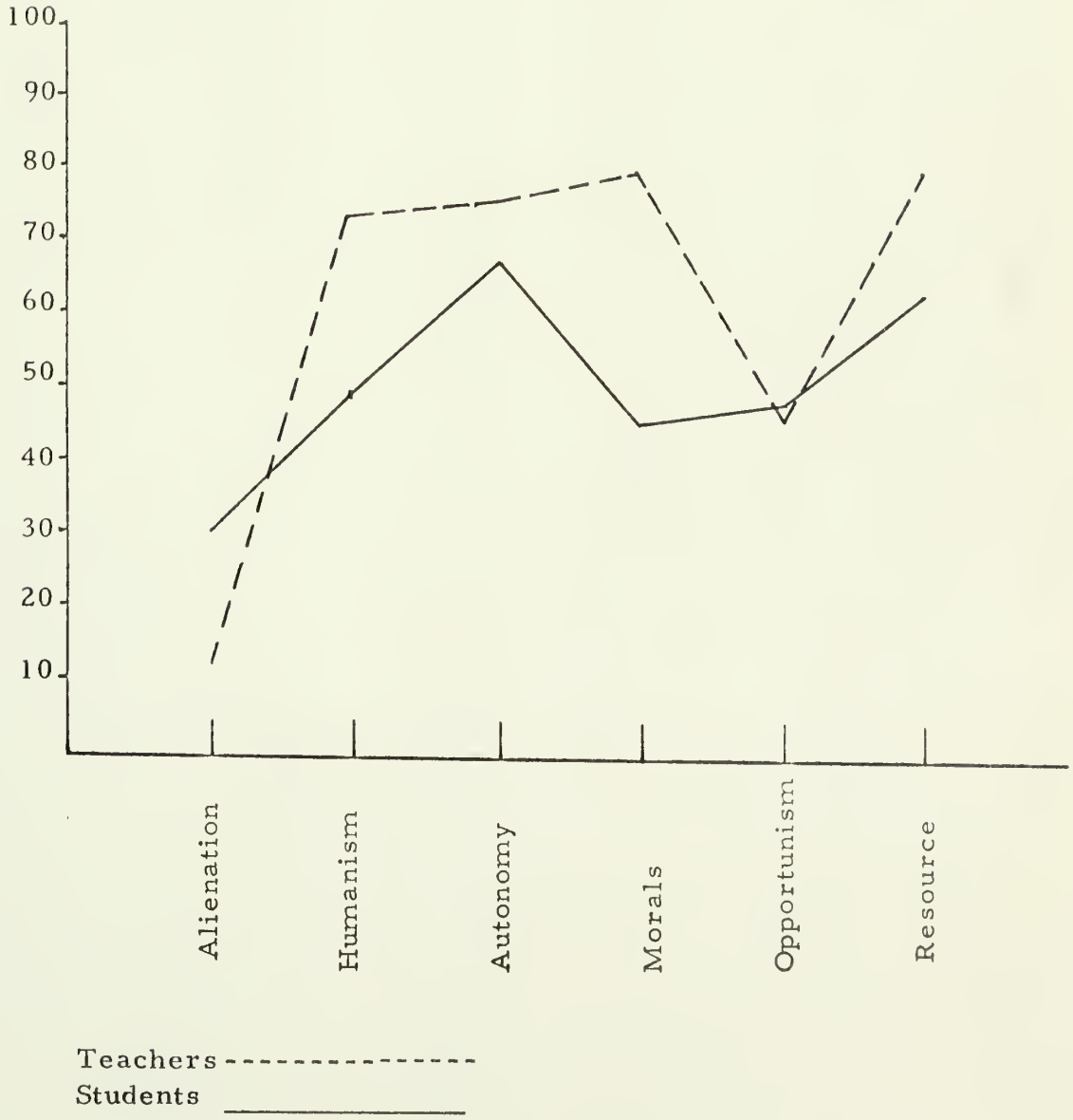
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 114



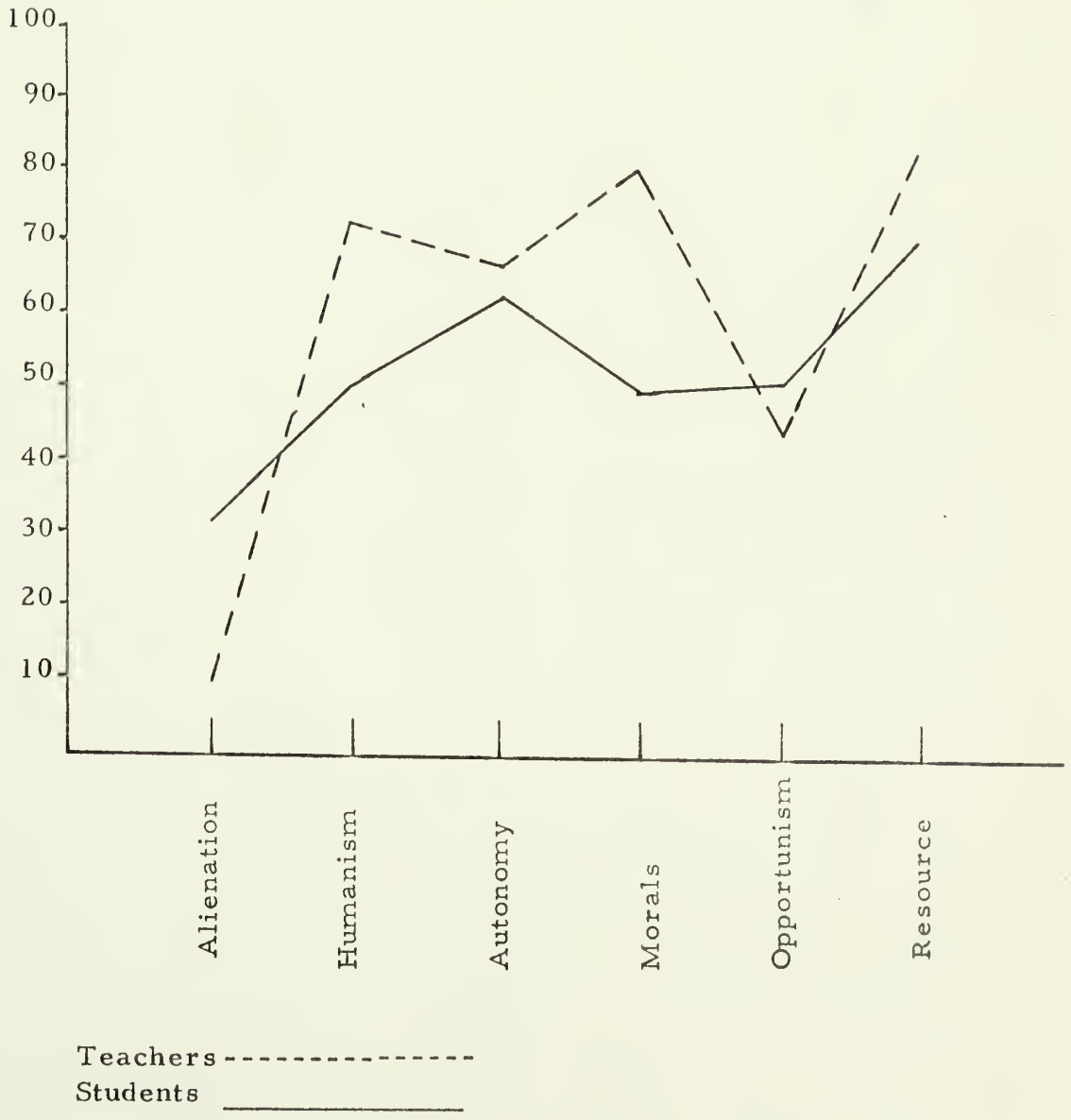
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 332



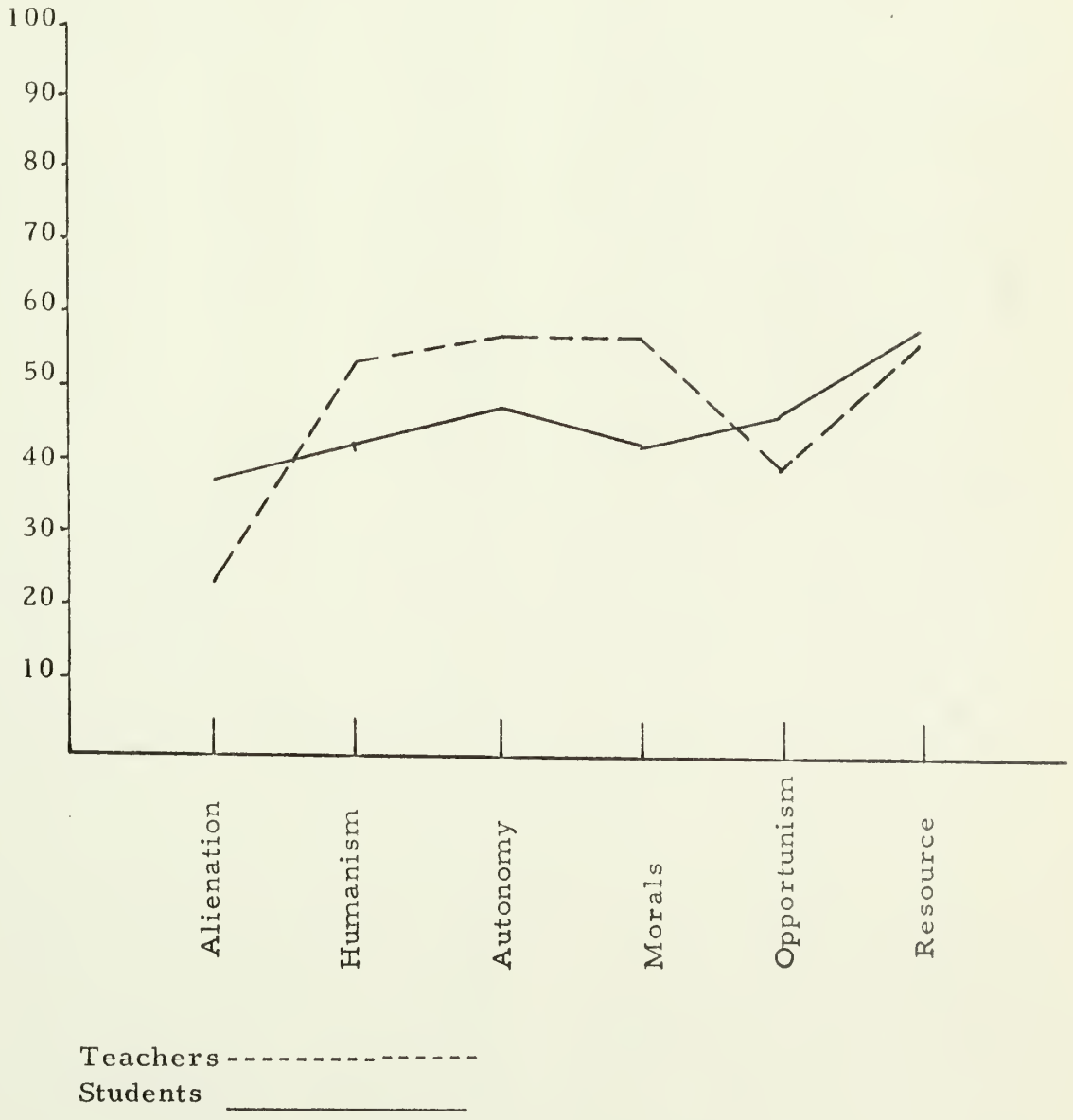
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 304



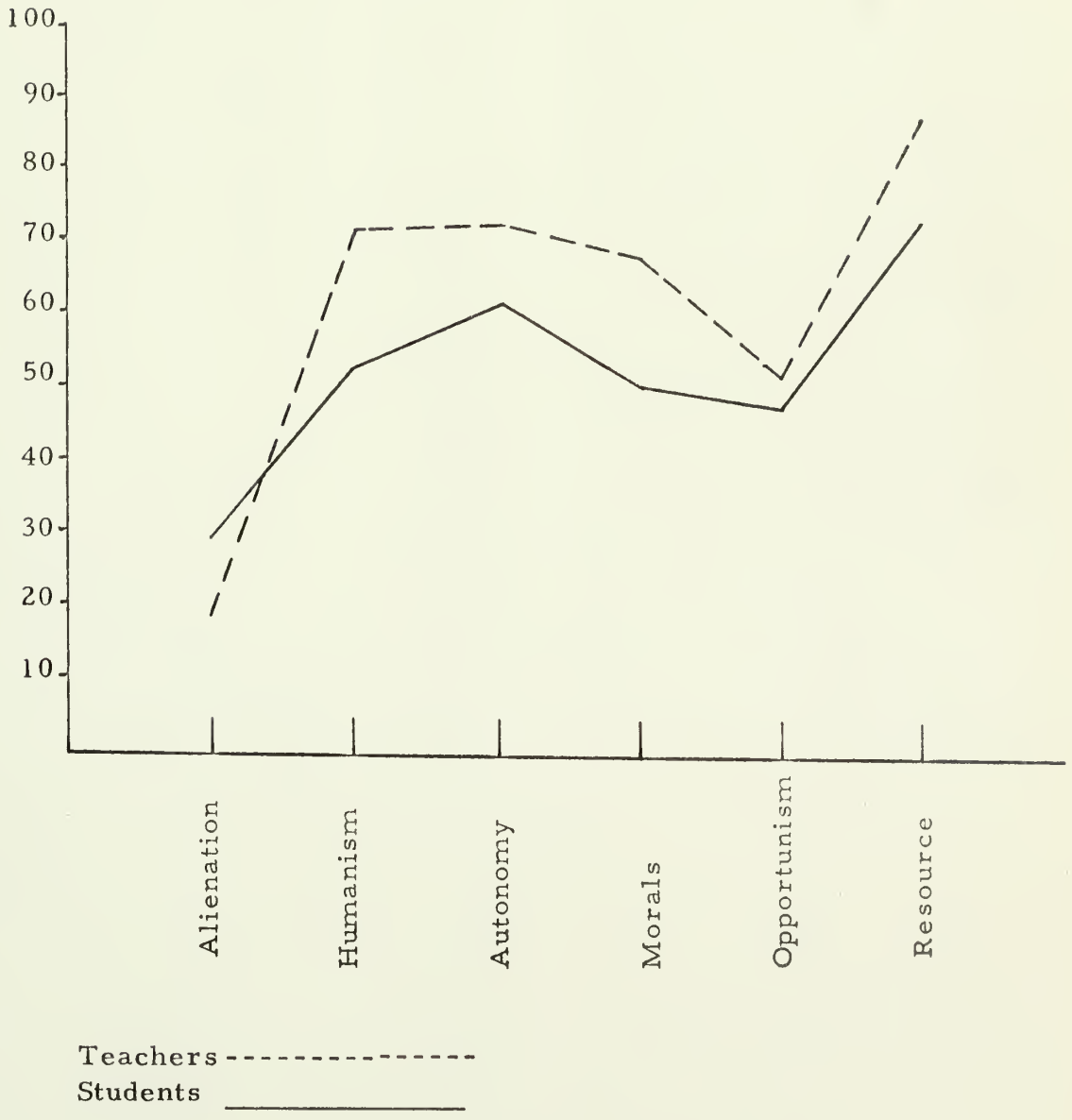
School Environment Pattern Across
Variables for Students & Teachers
Pattern 3
School 313



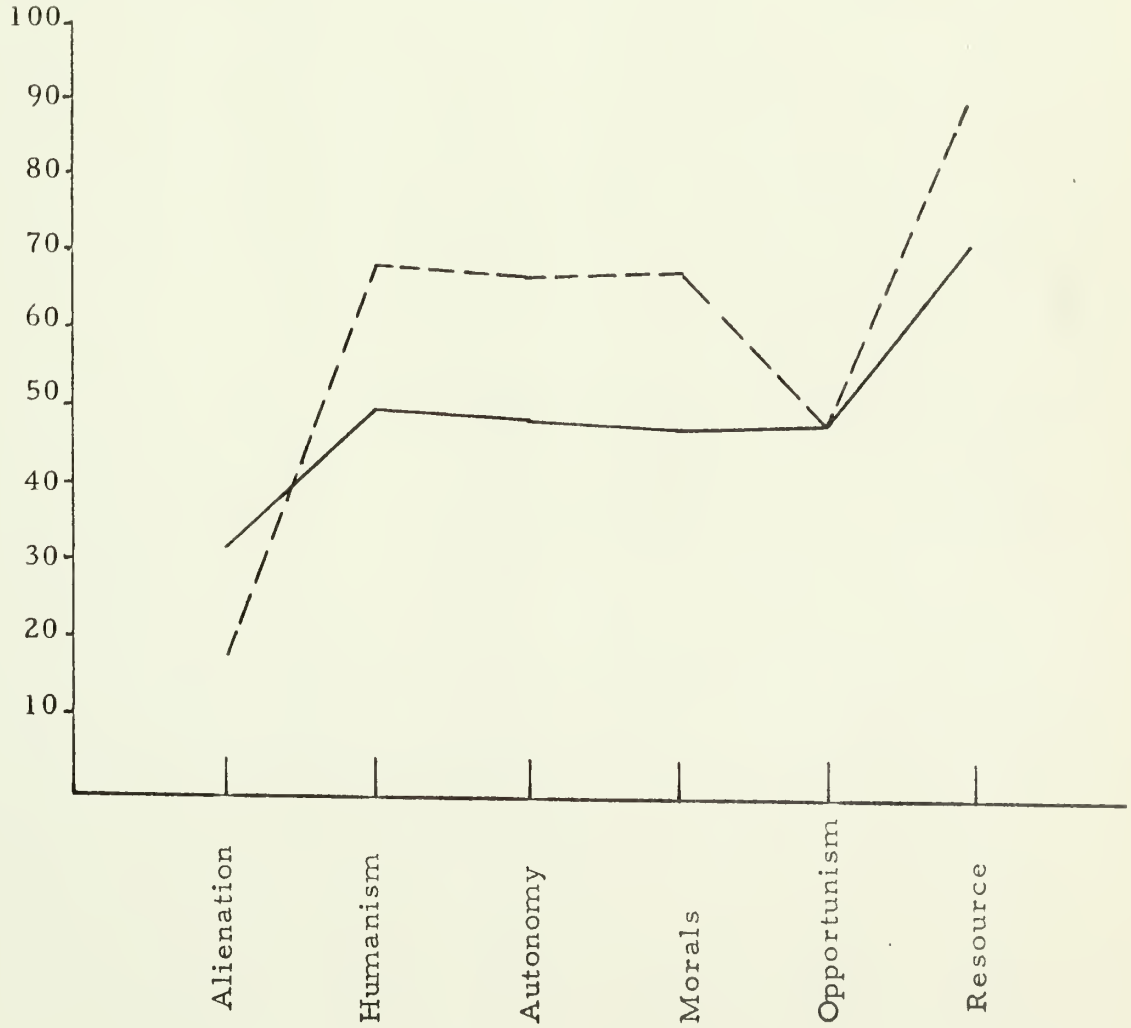
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 000



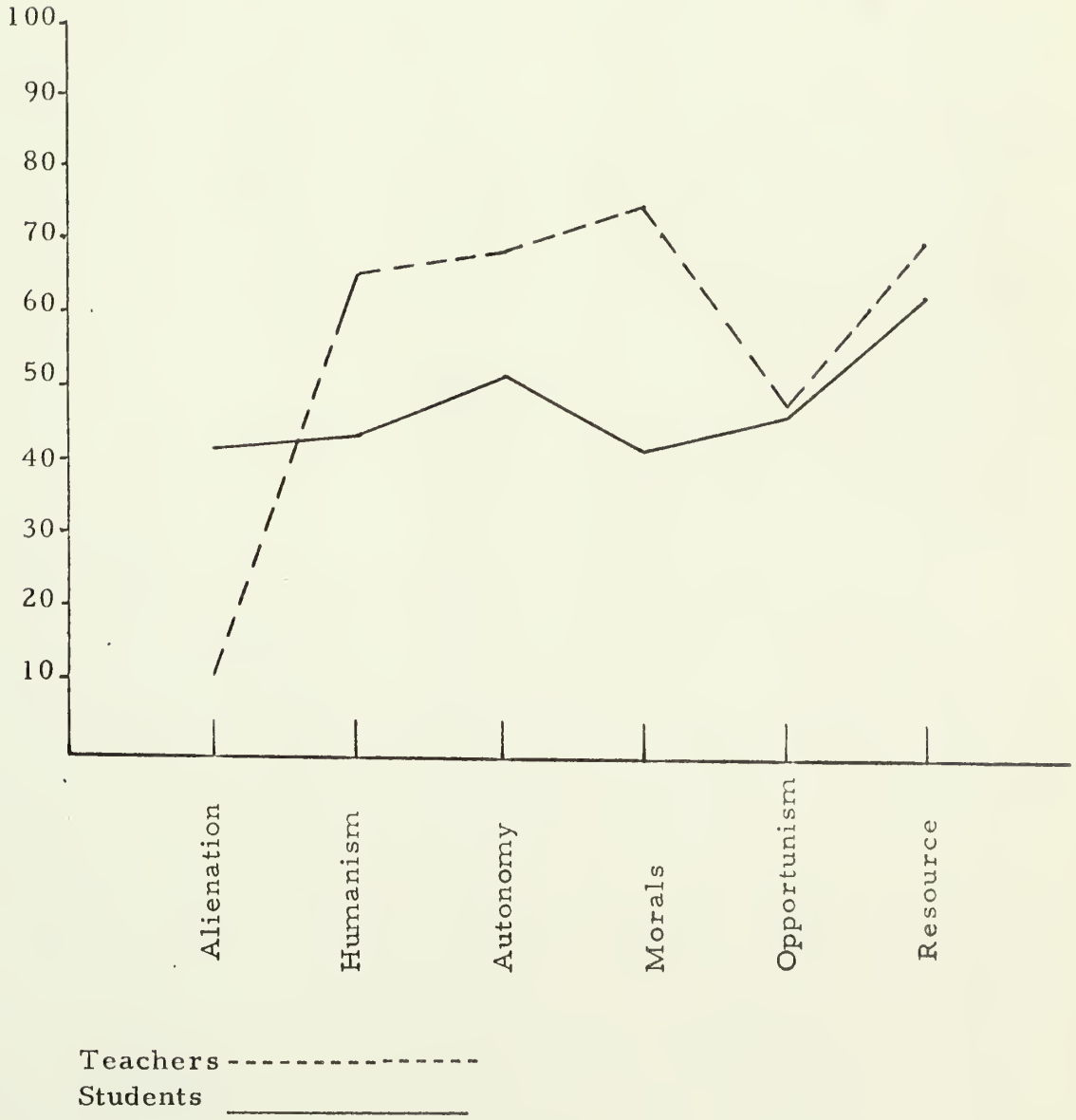
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 300



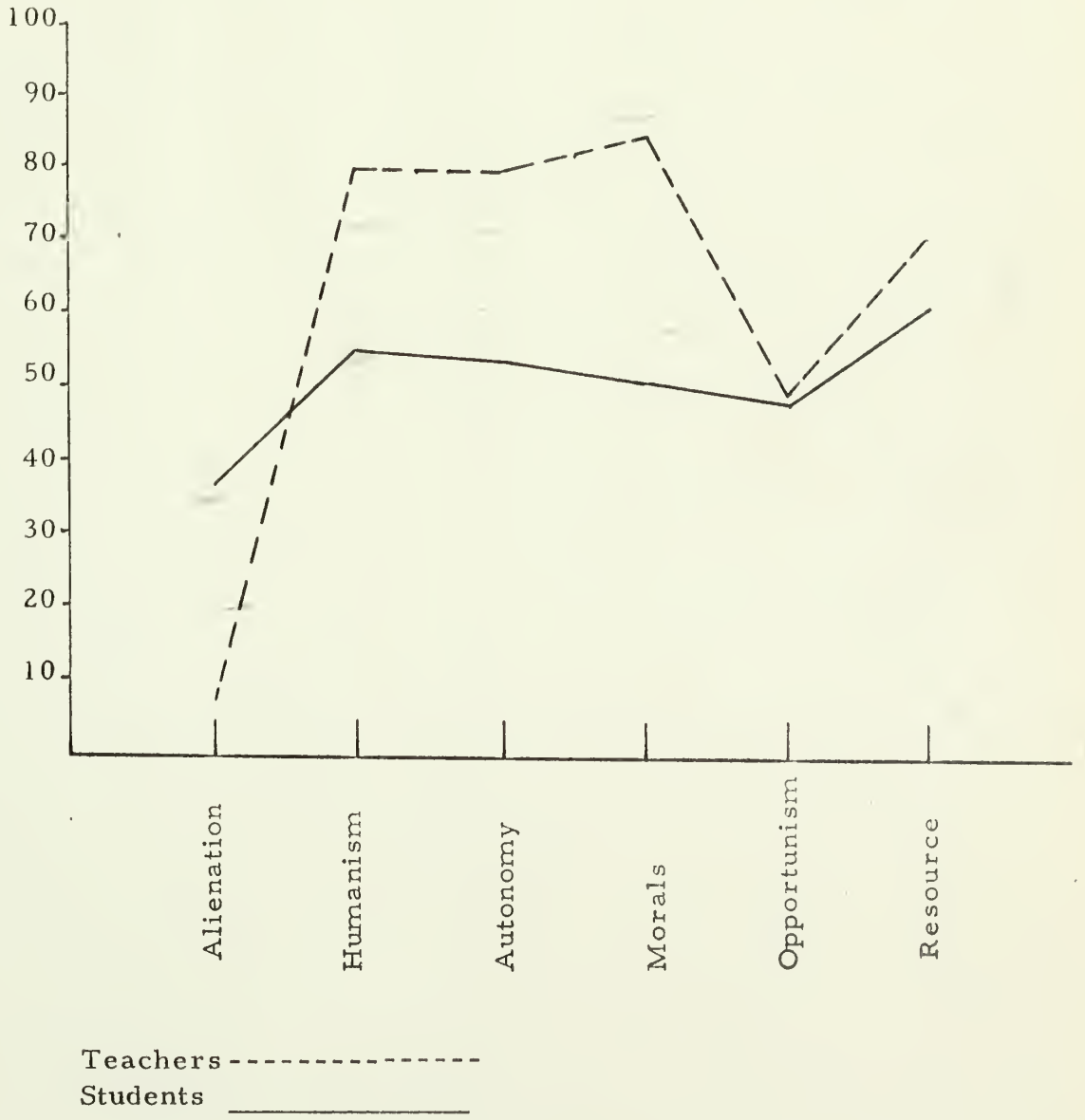
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 343



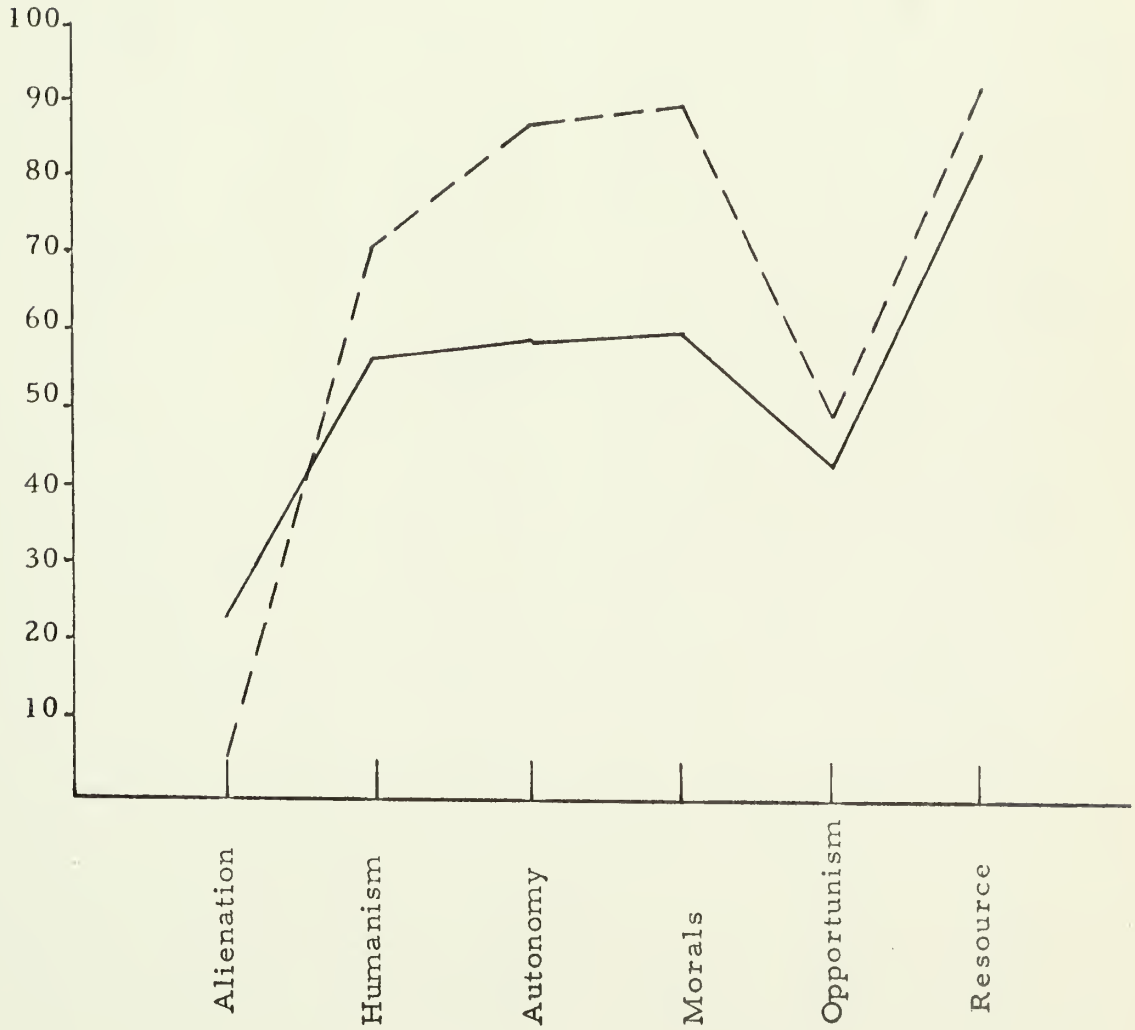
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 110



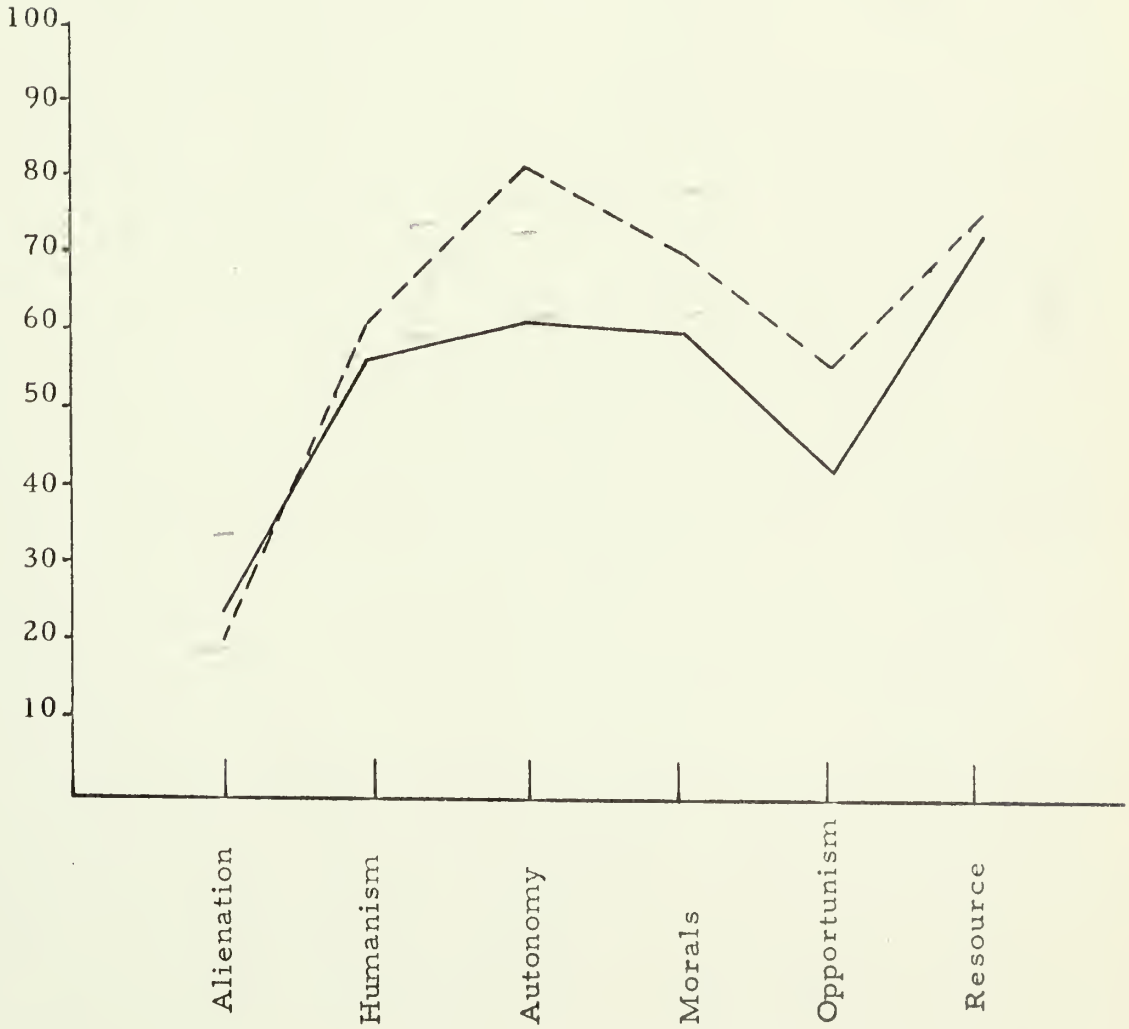
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 420



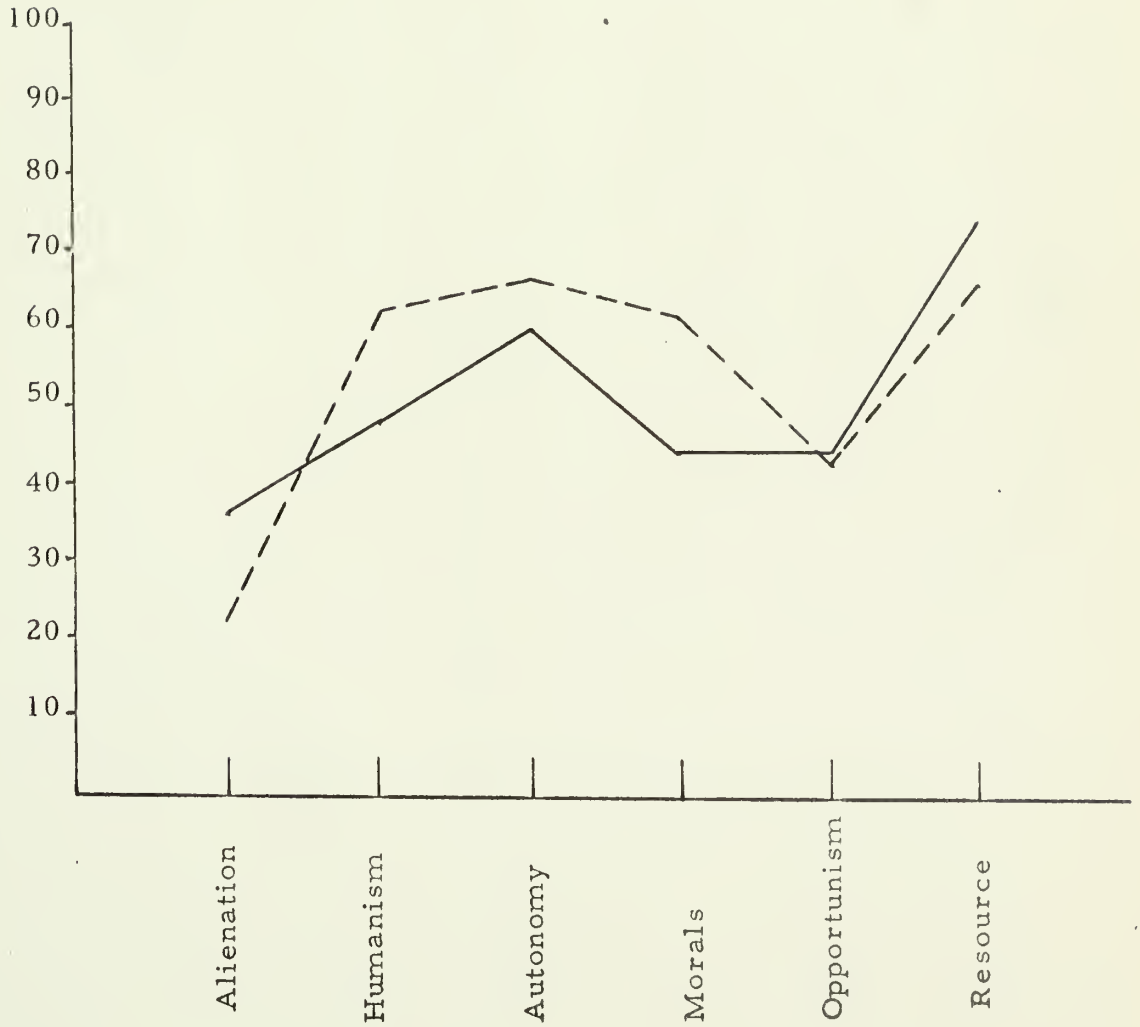
School Environment Pattern Across
Variables for Students & Teachers
Pattern 4
School 004



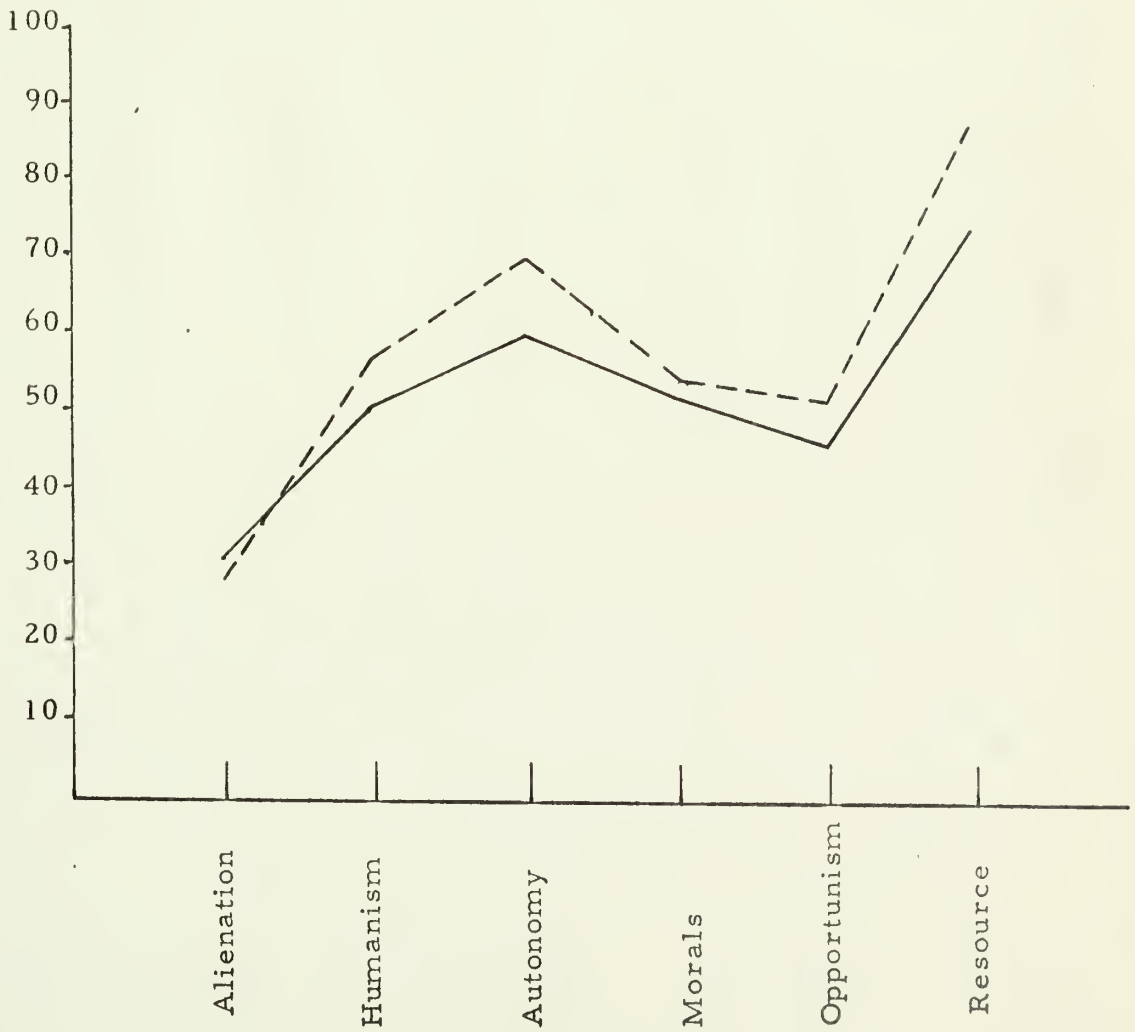
School Environment Pattern Across
Variables for Students & Teachers
Pattern 5
School 100



School Environment Pattern Across
Variables for Students & Teachers
Pattern 5
School 331



School Environment Pattern Across
Variables for Students & Teachers
Pattern 5
School 013



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